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ARCHITECTURAL RECORD

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STEEL REPLACES COPPER AS BRAKE ON BUILDING

Strike Losses Prolong Steel Controls; Aluminum and Copper Eased Again

Latest news is that April 1 will bring revisions of NPA's basic construction orders which will more than equal the relaxations once planned for July 1 and stymied by the steel strike. The ban on recreation building, oldest of the building curbs, will be lifted; commercial construction will get the same treatment as industrial; self-authorization will be allowed for multi-family housing. Orders at the new level can be placed now for April 1 delivery.

SETTLEMENT of the 55-day steel strike with its estimated cost to steel production of 20 million tons was followed by both bad news and good for architects and builders.

As expected, steel controls were tightened; the effect of the strike was to postpone lifting of CMP restrictions on steel, perhaps by as much as six months. Defense Production Administrator Henry Fowler has estimated April 1, 1953 as the earliest date by which the steel supply can be expected to reach its pre-strike level. Under the strict priority system NPA established to assure access to the curtailed steel supply for military and defense-related projects, it seemed unlikely that many non-defense starts in the industrial and commercial categories would be possible before 1953.

The good news of relaxations in curbs on copper and aluminum came almost simultaneously with the tightening on steel. Self-authorization levels were nearly doubled, in some cases more than doubled, by the new amendments to CMP Regulation Six. Further, NPA lifted the ban on the use of copper and aluminum for drains, gutters, downspouts, store fronts and for decorative purposes. All copper and aluminum curbs were expected to go as soon as stockpiles of these metals were returned to the substantial levels of early this year.

TABLE III.—*United States copper position 1950 and projected 1975*

[Thousand short tons]

	*1950**	*1975*
Consumption (actual)	1,730	[1] 2,500
Production:		
Mine	907	[1] 800
Secondary	475	[1] 700
	1,382	1,500
Imports (net)	448	[2] 1,000

*1950 consumption derived from data from American Bureau of Metal Statistics and U. S. Bureau of Mines. 1950 production and imports, Bureau of Mines.

[1] Projected.

[2] Required.

LONG VIEW ON COPPER: DESIGN ECONOMY RECOMMENDED

These charts from the report of the President's Materials Policy Commission show the pattern of production and consumption which lead the Commission to urge a technology of substitution to avoid future bottlenecks in copper supplies

TABLE IV.—*Geographical pattern of free world copper production and consumption, 1950**

Region	Percent of total free world	
	Mine production	New copper consumption
United States	36	49
Other North America	14	4
South America	18	2
Total Western Hemisphere	68	55
Free Europe	4	37
Africa	23	1
Australia and New Zealand	1	2
Other Eastern Hemisphere	4	5
Total	100	100

*Based on data from the International Materials Conference.

TABLE V.—*New copper position of the rest of the free world 1950 and projected 1975*

[Thousand short tons]

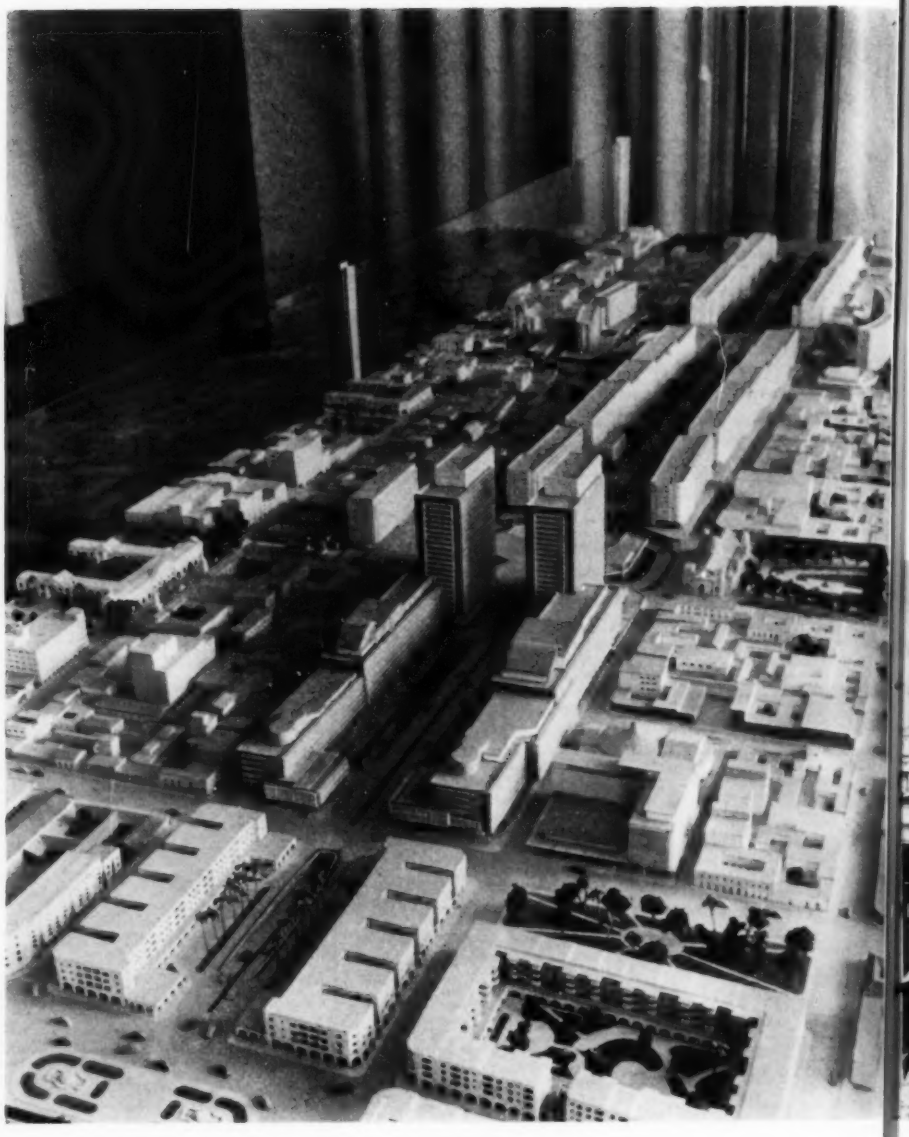
	1950	*1975*
Consumption (new copper)	1,343	[1] 2,050
Net exports to United States	448	[2] 1,000
Mine production	1,608	[2] 3,050

[1] Projected.

[2] Required.

SOURCE: 1950 consumption and production based on International Materials Conference data. 1950 exports from U. S. import statistics, U. S. Bureau of Mines.

Photos: Hamilton Wright



Right: architect's model of the whole scheme for Avenida Bolivar; tall buildings (center) are 28-story offices now under construction; bull ring (left foreground) is carryover from old Caracas. Above: helicopter view of first two completed buildings, highway entrance

$300 MILLION AVENIDA BOLIVAR MODELS NEW PLAN FOR

THE LONG-RANGE PLAN for redevelopment of Caracas has been launched with a mammoth initial project that is expected to serve as a model for all the subsequent reconstruction of the Venezuelan capital.

More than 400 buildings in the heart of the city have been torn down to make way for the $300 million Avenida Bolivar, a mile-long eight-lane express highway with underground terminals for 600 buses and underground parking for nearly 1600 cars. Twenty-four new buildings — 12 on each side of the central thoroughfare — will provide office and living space, shops and restaurants.

Two eight-story office buildings, each planned for 1500 workers, have now been completed; two more office buildings, each 28 stories high and providing for 2000 workers, are under construction. The highway itself is completed, but multi-level auxiliary routes to pass beneath the 28-story buildings are still under construction.

The completed office buildings cover 300,000 sq ft of ground area. They are occupied by government offices and the headquarters of the project directors.

The new wealth from oil discoveries that will bring production to an estimated two million barrels a day in 1953 has been the catalyst in the revival and revision of a 15-year-old scheme to solve the acute problem of congestion in the 400-year-old city.

The original Avenida Bolivar plans were made by architects and city planners called in by the government in 1937, then blocked by property owners and "traditionalists;" in 1946, with conditions increasingly bad, the government made another attempt.

A National Urbanism Commission was created to study the problem; it revised the old plans and this time it was possible to rally support for them. In 1948 the *Compania Anonima Obras de*

Left: louvered façade of "North" building, one of two completed structures; both have second-floor terrace cafeterias, sheltered walks for pedestrians

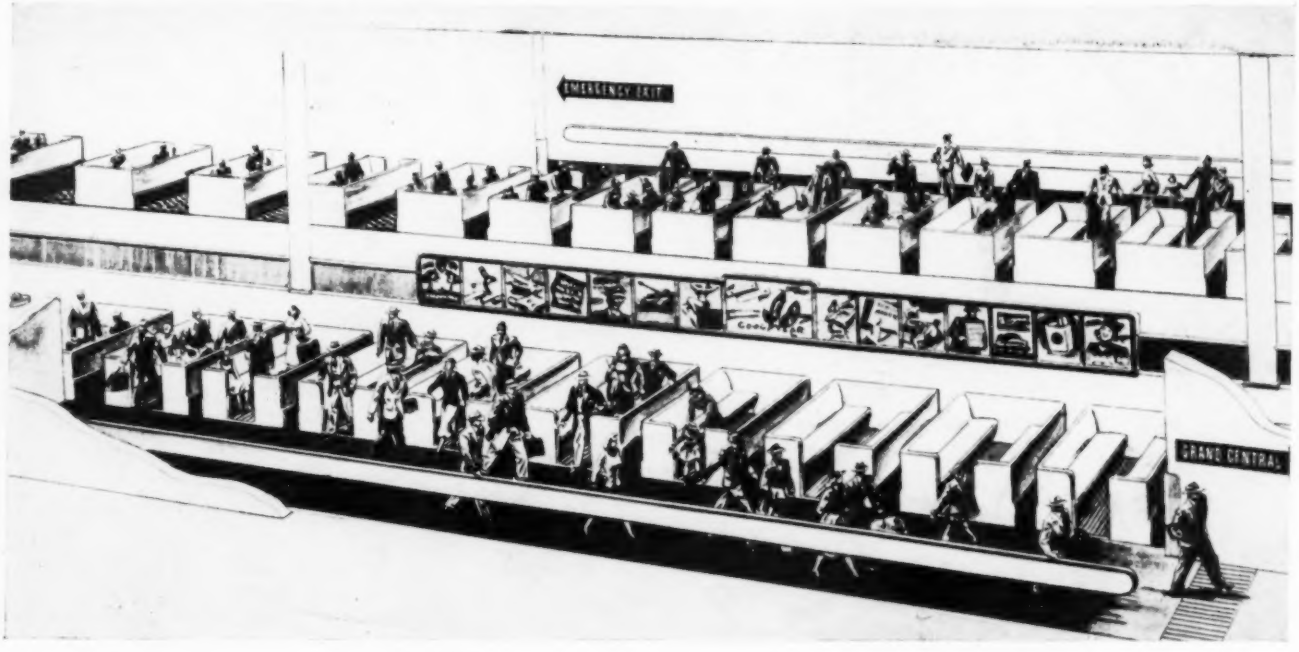
Above: view down mile-long highway showing underpass and (again) first two completed buildings. Left: constructing foundation for one of 28-story buildings (model photo below)

400-YEAR-OLD CARACAS

la Avenida Bolivar was organized with authority to condemn land and buildings to acquire needed space and to pay for these properties in government-backed bonds. The Avenida Bolivar company was set up with a capital of $10 million, jointly owned by the Government *Banco Obrero*, the Venezuelan Development Corporation and Caracas.

Overall direction of the project is in the hands of Dr. Miguel A. Marquez Rivero, president of the Avenida Bolivar company. Dr. Carlos Dominquez is head architect and chief engineer; assistant architects are Dr. Carlos Raoul Villanueva and Maurice Rotival.

Above: section of the architect's model shows 28-story buildings now under construction; terraces will have outdoor dining rooms



Sketch of proposed passenger conveyor belt system shows loading platform and synchronized belt with individual cars. Unloading belt is at rear

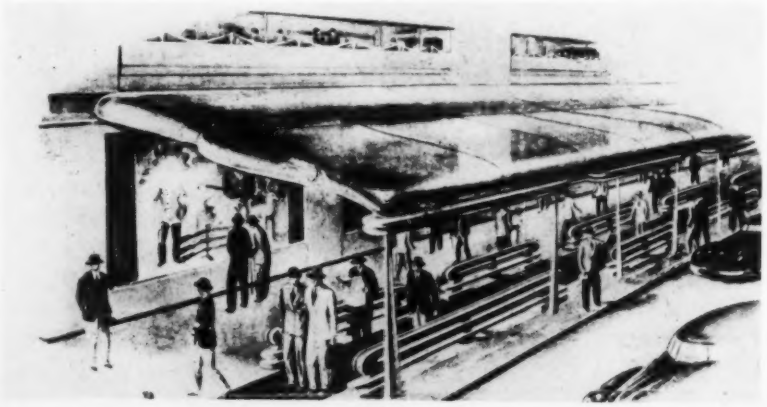
CONVEYOR BELT SYSTEM MAY REPLACE SUBWAY SHUTTLE

LAST MONTH in New York saw the announcement of a new engineering development which may have far-reaching consequences. The city's Board of Transportation has asked for $3,800,000 to replace the 34-year-old half-mile subway shuttle between Times Square and Grand Central Terminal with a passenger conveyor system designed to accommodate 15,000 people an hour. Cost of the conveyor system itself was estimated at $1,750,000, or about $700 per sq ft. The remainder of the requested funds will be used for changes in existing tunnel.

Experiment and research have been conducted by the Goodyear Tire and Rubber Company, which, together with the Stephens-Adamson Manufacturing Company, has worked out engineering details. Briefly, the system is to work as follows:

At either end of the shuttle will be a 6 ft wide loading belt, traveling at the rate of 1¼ mph. Synchronized with this will be another belt carrying a continuous stream of small passenger cars with seats. Each car will seat 10 people and 25 cars will pass the loading platform every minute. After leaving the loading point cars will be gradually speeded up to 15 mph over conveyor belts and banks of rubber-tired accelerating wheels. At the other end, they will be slowed again to 1¼ mph at a synchronized unloading platform. Then they will be turned around on a large wheel and sent in the opposite direction. The cars themselves will not be locked on the belts, but will be guided so that they will remain on the belts, without yawing. More specific details are not yet available, since patent arrangements are still in progress.

Below: N. Y. Transit Chief Sidney Bingham foresees use of belts as "moving sidewalks" for cross streets, stadium and airport exits, large market areas. Right: experimental Goodyear passenger belt



A.I.A. TREKKERS AT NICE

Some of the members of the post-convention Architects' Trek to Europe June 28–August 1 snapped in a time exposure by David H. Horn of Fresno, Calif., at the Hotel Ruhl, Nice. Seated: Leon Chatelain Jr., Washington, D. C., Mrs. Walter T. Rolfe, Houston, Alben Froberg, Oakland, Calif., Mrs. Froberg, Mr. Rolfe, Paul Gerhardt Jr., Chicago, Mrs. Chatelain, Talmage C. Hughes, Detroit, George Bain Cummings, Binghamton, N. Y., Trek leader, and Mrs. Cummings, Hiram A. Salisbury, Houston, Paul L. Gaudreau, Baltimore. Standing: Mrs. R. V. Higginbotham, Dallas, Arthur Hooker, Muskegon, Mich., Mrs. Thomas D. Broad, Dallas, Mrs. Hughes, Richard Walker, R.I.B.A., Trek director, W. Sargent Lewis, New Haven, Conn., Miss Abigail Lewis, his daughter, and David Horn

GREAT CONVOCATION MARKS ENGINEERING CENTENNIAL

THE LARGEST CONVOCATION of engineers in history will assemble September 3–13 in Chicago for the Centennial of Engineering marking the 100th anniversary of the founding of the American Society of Civil Engineers.

Some 30,000 engineers representing every branch of the profession and 61 American and foreign societies are expected to take part in a program that will include 12 symposiums on basic aspects of engineering's impact on civilization; technical and other functions sponsored by more than 40 individual societies; engineering exhibits in the Museum of Science and Industry; and a dramatic stage production portraying significant developments in engineering.

Nearly 500 engineers from 20 nations in Europe, South America and Asia will attend the Centennial.

John O. Merrill, A.I.A., of Skidmore, Owings & Merrill, Architects & Engineers, and Walter C. Voss, A.I.A., of Massachusetts Institute of Technology, will deliver major addresses in the symposium on Structures and Construction. Other symposiums will deal with the role of the organized profession; education and training; food; tools; transportation; mineral industries; chemical industries; communications; energy; health and human engineering; urbanization.

The American Institute of Architects, which will celebrate its own centennial in 1957, paid its tribute to the civil engineers with the special exhibit "Re-Union of Architecture and Engineering 1852–1952" at its 1952 convention.

LINE MAGAZINE SEEKS TO PROVIDE STUDENT FORUM

LINE MAGAZINE, the publication founded last year by architectural students for architectural students, is starting its second year with a determined crusade for more student contributors, more student editors and — a necessity for survival — more student subscribers.

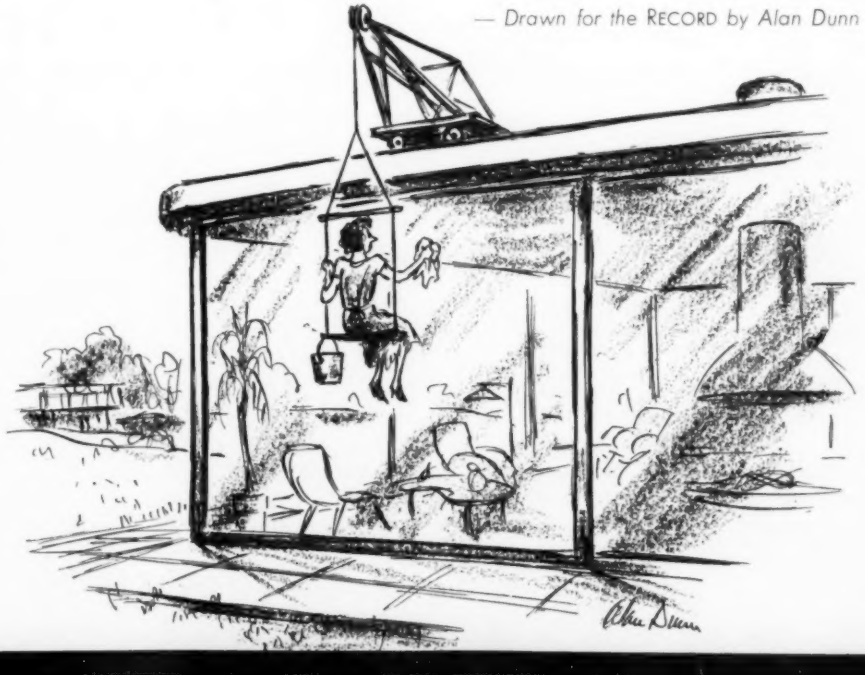
Robert Laden of Cooper Union, who has succeeded Julian Sachs of Catholic University as editor-in-chief, emphasizes that the columns of the magazine are open to all architectural students. A staff of regional editors will attempt to keep the magazine in touch with schools of architecture throughout the country.

Three issues, the first in October, are offered for the subscription price of one dollar; architect subscribers are welcomed. The two issues published last year had a circulation of under 1000; a large increase is needed to make the magazine self-supporting. It carries no advertising.

Arthur Hald of Catholic University is business manager; David Dambowic of Cooper Union is art director.

Regional editors are: North Atlantic — Robert Laden, Cooper Union; New York State — A. Rothenberg, Rensselaer Polytechnic Institute; Middle Atlantic — A. Noel Alterman, Virginia Polytechnic Institute; Southeastern — Vince de Gutis, North Carolina State; Central States — Bayes Norton, Miami (Ohio) University; Upper Middle West — Roger Mohagen, North Dakota Agricultural College; Central Middle West — Manfred Wolfenstein, Kansas State; Southwestern — Jerry Kirkwood, Texas Institute of Technology. Editors for the California and Northwest regions were being sought.

— Drawn for the RECORD *by Alan Dunn*



Far right: David Warsaw, Detroit Concrete Products Association president, Michigan Dean Wells Bennett, A.I.A. 2nd V.P. Norman Schlossman; C. Allen Harlan, president, Detroit Electric Co.; Mrs. G. Mennen Williams, wife of Michigan's governor; President Leo Bauer; right: Adrian Langius, Frank Lopez, Park Commissioner W. F. Doyle, A.I.A. Regional Director John Richards, President Ivan Kirlin of Kirlin Co., A.I.A. Secretary Clair W. Ditchy, and in foreground — Roger Allen

Above: Small House Competition First Prize Winner William P. Smith and Mrs. Smith. Below (foreground): Herbert L. Hawthorne, who won third prize, and Mrs. Hawthorne; the second prize winner, Donnally Palmer, and Mrs. Palmer

Above: Mrs. Ivan Kirlin; Leo Bauer, his sisters, the Misses Ann and Mary Bauer; Frank Lopez; Mrs. Robert Franden; Mrs. Lopez; Ivan Kirlin; Robert Franden

W. Stewart Woodfill, proprietor of the Grand Hotel, and guest, Jack Benny

Conference Chairman Ralph Knuth and one of his daughters

MICHIGAN ARCHITECTS MIX FUN AND BUSINESS AT MACKINAC

FUN AND FELLOWSHIP were the major theme of the ninth annual midsummer conference of the Michigan Society of Architects July 31–August 3 at the Grand Hotel on Mackinac Island. Ralph W. Knuth of Flint, conference chairman, had judiciously interspersed the serious business to add flavor to a four-day holiday.

Entries in the Small House Competition jointly sponsored by the Society and the Concrete Products Association of Detroit were on exhibition and prize-winners (see page 22) were announced at the closing banquet. The competition drew 57 submissions from architects, architectural students and draftsmen in 39 Michigan towns.

Dr. Walter Cocking, editor of *The School Executive* Magazine, in one of two formal speeches on the conference program, said new concepts are needed for secondary schools — "let's dream a little," he urged. His own dream, he said, is the campus-type plan with a number of small buildings instead of a single building under one roof.

In his address at the banquet, Frank G. Lopez, senior associate editor of ARCHITECTURAL RECORD, suggested that architects must be concerned with the layman's reaction to architecture both for the practical reason that *clients* are laymen and out of a broader concern with the position of architects and architecture in the culture of our times.

One of the memorable sidelights of the conference was the presentation by Lawrence Plym of the trophy case made as a gift to the society by the Kawneer Manufacturing Company to house the "Man of the Year" awards annually bestowed on one society member (this year Clair W. Ditchy) by the Portland Cement Association.

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SEE OUR CATALOG IN SWEETS FILE

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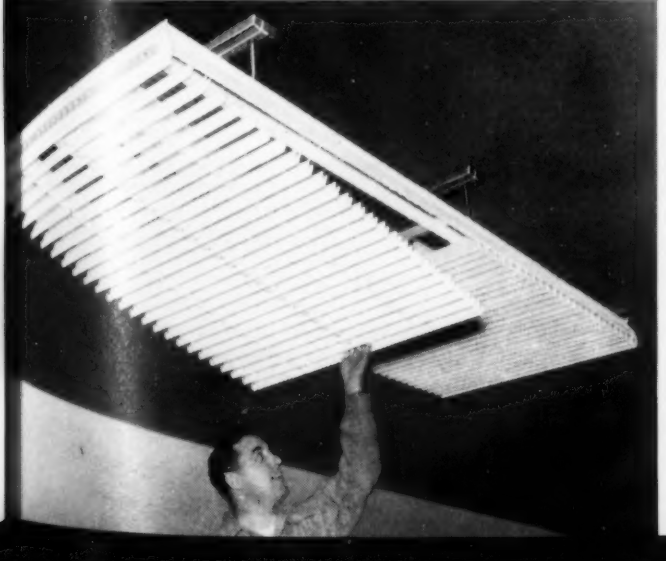
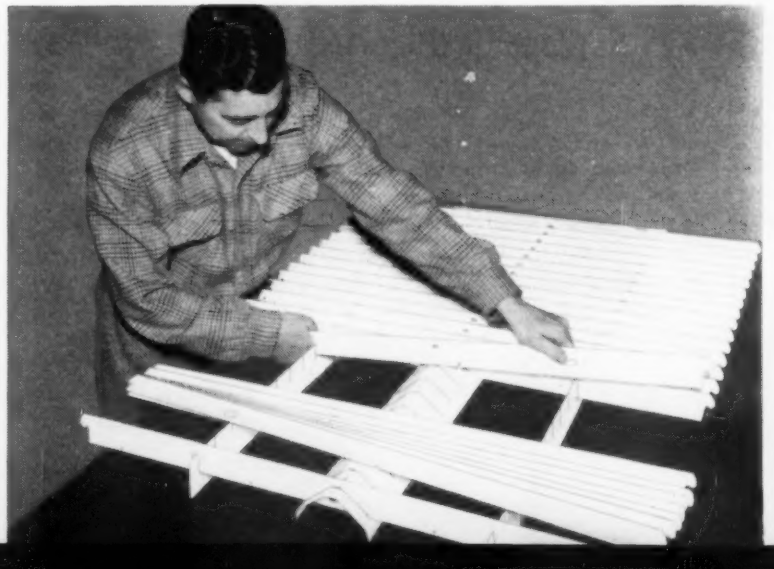
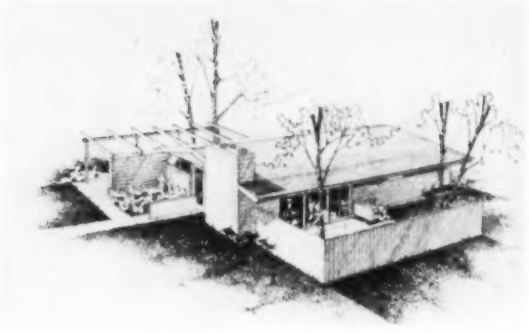




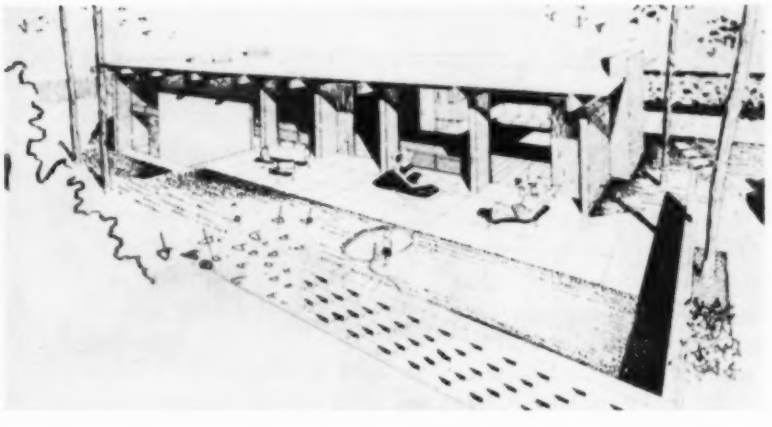
MICHIGAN (*Continued*): SMALL HOUSE AWARDS

Prizewinners in the Small House Competition co-sponsored by the Michigan Society of Architects and the Concrete Products Association of Detroit were announced at the Society's Mackinac meeting. The top three designs, shown on this page, and 10 mention winners begin a tour of Michigan cities this month



First prize of $1000 went to William P. Smith Jr. of Willow Run Village, Mich., a draftsman. All three of the top prizes were awarded to draftsmen

Donnally W. Palmer of Royal Oak, Mich., received the second prize of $750. Entries had to be designed for concrete masonry construction



Third prize of $500 was awarded to Herbert L. Hawthorne of Detroit for his entry. Ten mentions, $100 each, went to Edward C. Bassett, R. C. Donkervoet, Joseph F. Dworski and Edward P. Elliott, Morris Jackson, W. K. Kagawa, J. R. Livingston, Douglas D. Loree, Robert J. Meacham, Avar Naggar and Leonard S. Parker

FIVE A.I.A. REGIONS PLAN OCTOBER SESSIONS

THE FIRST REGIONAL CONFERENCE ever held by the South Atlantic District of the American Institute of Architects leads off the fall and winter round of A.I.A. district sessions. The meeting, sponsored by the Georgia Chapter, is scheduled September 18–20 at Atlanta. "Schools in the Southeast" will be the theme of all the seminars.

Next month will bring five A.I.A. regional meetings and four conventions of state chapters.

The Northwest district will have a regional council meeting at Spokane; the other conferences will be full-dress regional gatherings with working seminars on a wide variety of subjects.

State meetings: Oct. 1–13 — Architects Society of Ohio, at Cincinnati; Oct. 2–4 — New York State Association of Architects, at Lake Placid; Oct. 9–11 — California Council of Architects, at Yosemite; Oct. 29–31 — Texas Society of Architects, at El Paso.

Scheduled regional conferences: Oct. 2–3 — Great Lakes District, at Cincinnati; Oct. 3–5 — Northwest District, at Spokane; Oct. 9–11 — Central States District, at Kansas City; Oct. 9–11 — Sierra Nevada District, at Yosemite; Oct. 24–25 — Gulf States District, at Montgomery, Ala.

The national A.I.A. Board of Directors will hold its semiannual meeting Oct. 26–28 at the Grand Hotel, Point Clear, Ala.

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THE RECORD REPORTS

SARAH LAWRENCE BUILDS NEW FINE ARTS CENTER

NOW UNDER CONSTRUCTION on the campus of Sarah Lawrence College in Bronxville, N. Y., is a Student Arts Center building designed by Marcel Breuer. Although the structure will be primarily an arts laboratory and college center for 350 students and 65 faculty members, it is also intended to serve the surrounding Westchester community as a meeting place for college events and community functions. When completed, it will cost approximately $500,000.

When the college, hard pressed for additional facilities, decided to build the center, it had a complicated set of requirements to offer the architect. "Every part of this program had to be designed for multiple use," Mr. Breuer has said: "Teaching *vs.* performance, social life *vs.* meditation, cost-dictated simplicity *vs.* multi-purpose complications."

Specifically, the building had to provide for an auditorium, theater, dance studio, student living room, snack bar, college store, music rooms and workshops.

The auditorium and stage are situated on the upper level of the building (see diagram, page 354). A roof terrace at the front leads into the auditorium on this level. Immediately below it is the area which accommodates the living room and snack bar.

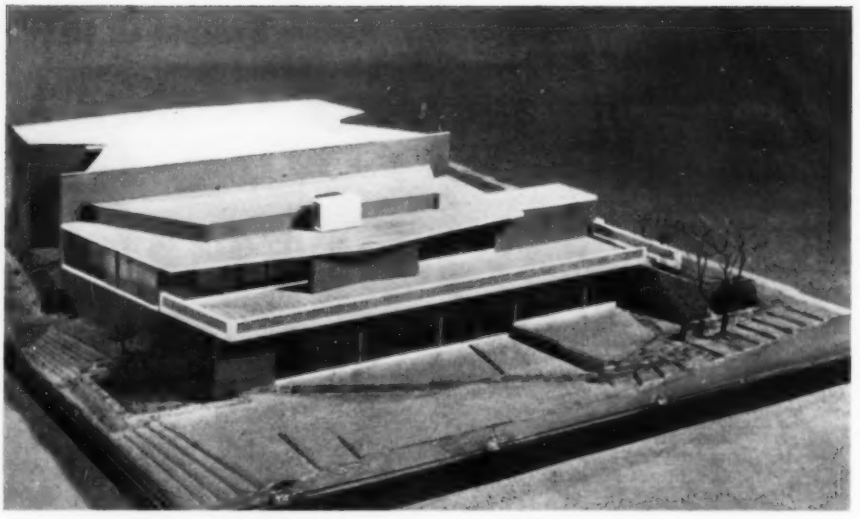
On a slightly lower level behind this and just under the auditorium is the dance studio, flanked on either side by dressing rooms and quarters for music instruction and practice. Orchestra lift and sub-stage are at the rear, with space for mechanical equipment to one side.

The dance studio will accommodate 40 students, the living room 80 to 100 persons, and the snack bar will be equipped to serve 60 customers an hour. The front façade of the living room is completely glazed and leads onto an open flagstone terrace.

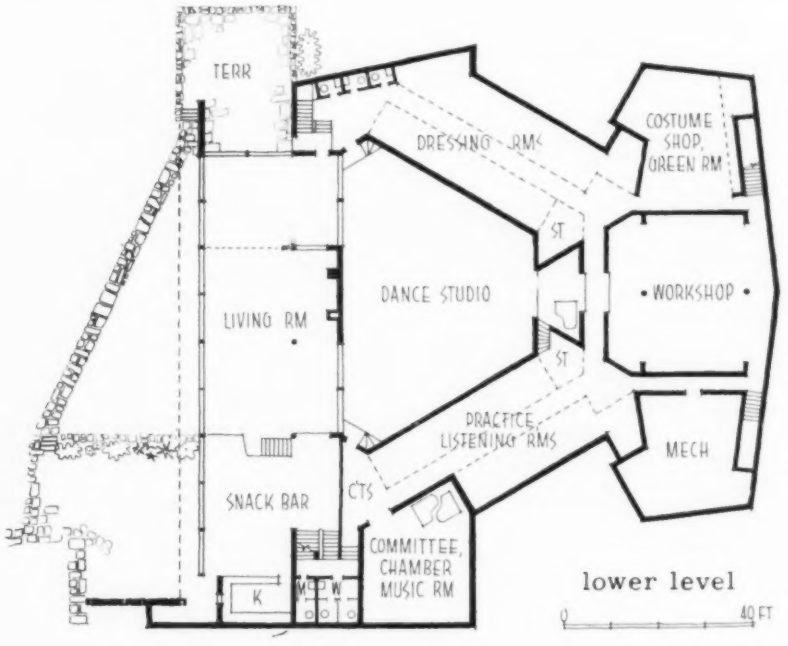
The 500-capacity auditorium-theater has removable alternate rows of seats which can be replaced with work tables or cabaret tables for forums, college dances and the like. Each seat is swiveled, to permit audiences to follow swift stage action.

An ingenious orchestra lift can be raised from ground level to conventional pit level, to floor level of the auditorium

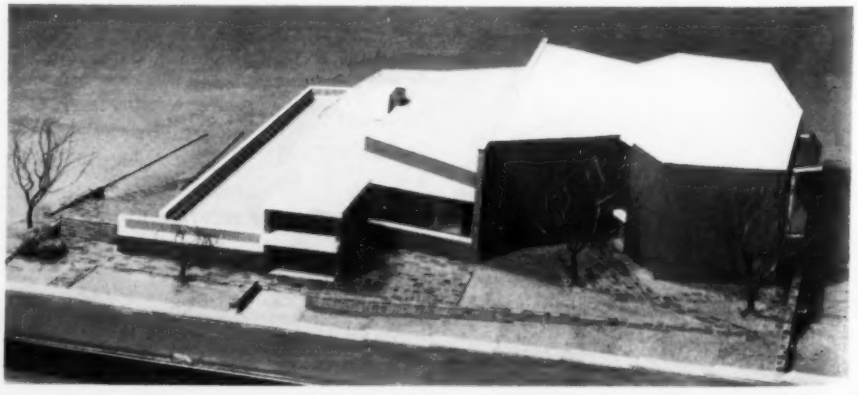
(*Continued on page 354*)



Above: view of model from front shows glass-walled living room, with terrace above. Auditorium and stage are at rear, upper level



Plan, above, shows facilities on lower level. Dance studio and rooms at sides of building are below auditorium. Below, model from side



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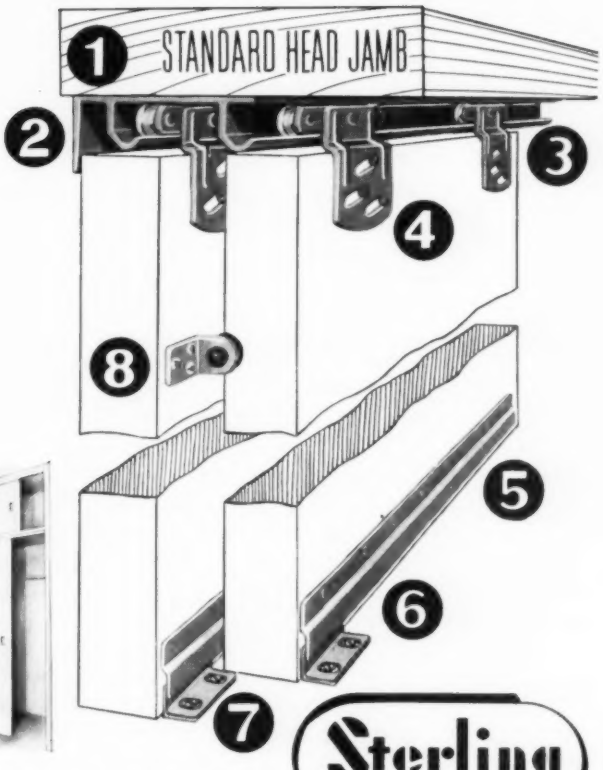

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4. **ADJUSTABLE HANGERS.** Slotted screw holes make it easy to plumb door with jamb.
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6. **DOOR GUIDES** can be installed after doors are hung. Slotted screw holes permit easy adjustment.
7. **NO TRACK ON THE FLOOR** to catch dust and dirt . . . floor is clear and clean at all times.
8. **DOOR STOP** keeps flush pull on rear door always accessible. Fingers can't get pinched.

Write for Catalog on Sterling line of Sliding Door Hardware for wardrobes, pocket doors, side doors in home garages and other Sterling products.

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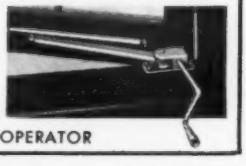
STERLING CASEMENT WINDOW HARDWARE

No. 190 EXTENSION HINGES

No. 165 PULL-TITE CLOSER



No. 61 CASEMENT WINDOW OPERATOR

★ See our Catalog in SWEET'S Architectural File 18d/ST and Builders File 4e/ST

★ See our display at THE ARCHITECTS SAMPLES CORPORATION New York, New York

STERLING HARDWARE MANUFACTURING CO.

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NEWS FROM CANADA *by John Caulfield Smith*

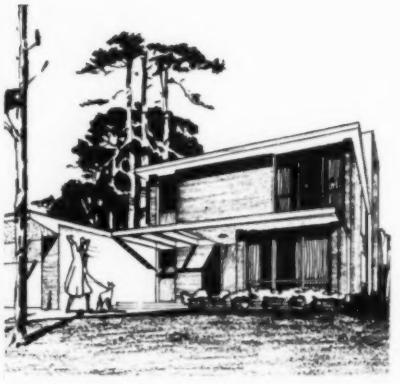
TWO OFFICE BUILDINGS PLANNED FOR TORONTO

TWO LARGE OFFICE BUILDINGS scheduled to be constructed soon in Toronto will increase the city's available office space by approximately 325,000 sq ft.

One of them, a 15-story building designed by Earle L. Sheppard, architect, will be one of the city's largest office structures in terms of rentable floor space. This will amount to about 175,000 sq ft. To be known as the Exchange Building, it will front on the south side of Adelaide Street, between Yonge and Bay Streets. Indoor parking will be provided for tenants in a three-level parking garage below ground. The structure will be L-shaped and of steel frame construction. The exterior will be faced with stone. Cost is estimated at about $3,000,000.

The second building, for which Page & Steele are architects, will be a 12-story structure and with its walls of glass will be the first building of its kind in Canada. It will be erected on the southeast corner of Richmond and York Streets, and will cost an estimated $2,500,000. No name has yet been chosen for the building, which will also feature a three-tiered parking garage in the basement. It will provide 150,000 sq ft of floor space, and the ground floor will be rented to banks or stores. Construction will begin when steel restrictions are relaxed, and is expected to be completed within 18 months.

The provision for indoor parking facilities is an innovation in Toronto office structures. The Exchange Building was to have been the first in the city to include an indoor garage, but will now be sharing its honors.

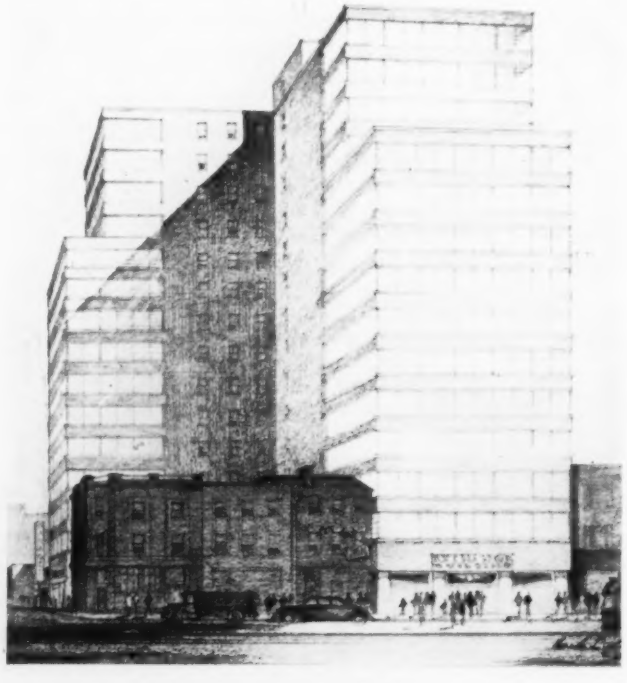


DESIGNED FOR PROMOTION

The house shown here was designed by Venchiarutti & Venchiarutti for use in a public relations project sponsored by the Ontario Association of Architects. An article pointing out the advantages of retaining architects to design residences was also prepared. The article, together with a mat of the drawing above, was sent to editors of newspapers in all Ontario communities of 20,000 or more population. Appearance, practical planning, higher resale value were stressed.

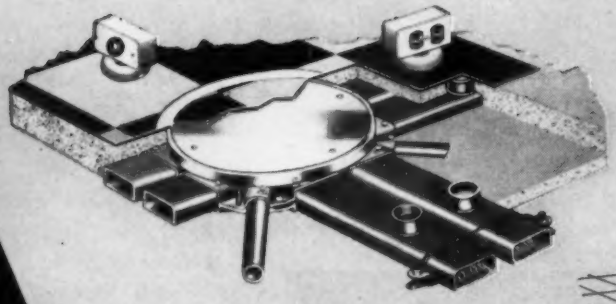
(Canada News continued on page 32)

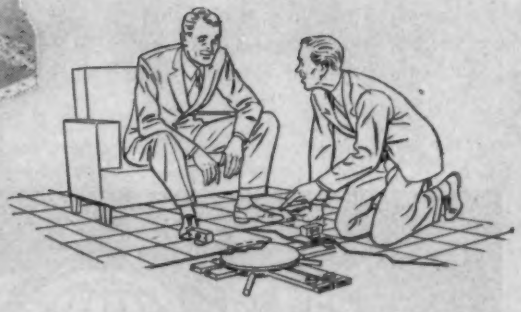
Ken Bell



Fifteen-story Toronto office building will have indoor parking garage. Earle L. Sheppard, Architect

Canada's first glass-walled office building, to be built soon in Toronto. Page & Steele, Architects





There are 100,000 electrical convenience outlets in the first three units of Pittsburgh's multi-million dollar Gateway Center, thanks to Nepcoduct! Nearly 38 miles of National Electric's all-steel underfloor electrical raceway supply power for lighting, business machines, telephone, buzzer and signal systems in these ultra-modern office buildings.

Nepcoduct provides the ultimate in electrical convenience—outlets *anywhere* they are needed. No matter how often office layouts and movable wall partitions are changed, Gateway tenants have easy access to power and communication *at the floor surface.* Outlets are already threaded, ready to use, just below the floor cover.

Nepcoduct fits any type of floor construction—ideal for new construction or wiring modernization of OFFICES, FACTORIES and COMMERCIAL BUILDINGS.

Nepcoduct is a *permanent* wiring system. Yet it provides all the flexibility and convenience of temporary wiring *for all time*—at a fraction of the cost required for extension, expansion and relocation of ordinary wiring systems.

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Title_____

Company_____

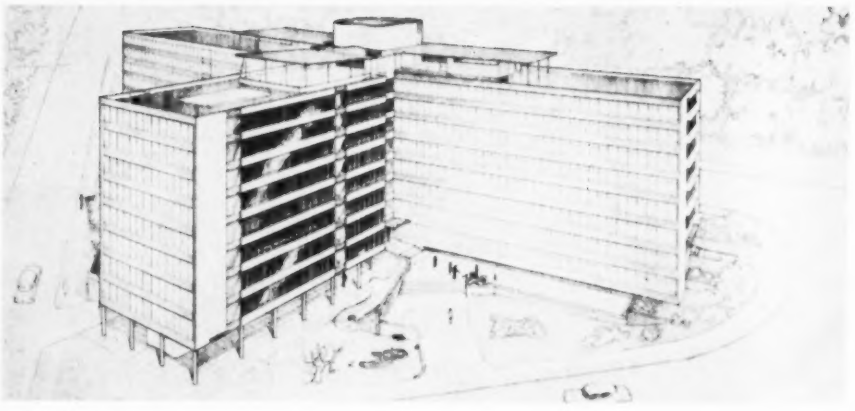
Address_____

CANADA

(*Continued from page 28*)

Housing Leads July Contract Award List

July construction contract awards valued at $139.4 million carried the total for the first seven months of 1952 slightly above the billion dollar mark, according to MacLean Building Reports Ltd.



Graham Warrington

Hycroft Towers Apartments, Vancouver, B. C., are reported to be the largest in Canada. Of the 155 apartments, 25 are "double" luxury dwellings which may be subdivided, permitting increase to 180 apartments if necessitated by economic conditions. Architects are Semmens & Simpson, Vancouver.

These figures, however, both for the month and for the year to date, are under last year's totals of $362.8 million for July and $1½ billion for the first seven months.

Housing led the field in the month's activities. In contrast with substantial drops in industrial and engineering construction, and also with a less drastic decline in commercial construction, residential building rose $20.9 million over last year's figure to a total of $64.7 million.

Commercial Drops

Commercial construction for July amounted to $39.3 million, as compared with $47.4 million for July 1951. Industrial construction figured for only $11.5 million, down $40.6 million from last year, and the $23.9 million total for engineering work was off $159.6 million from the previous figure.

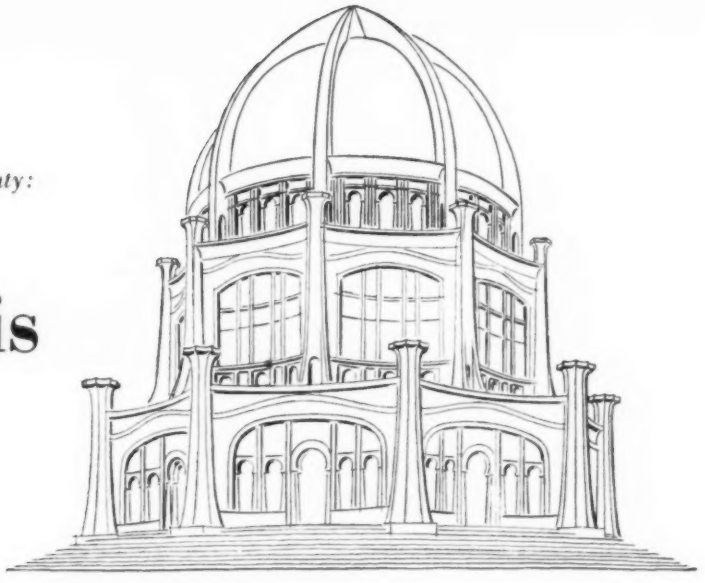
Heading the list of big jobs for the month were a project of 147 houses at Edmonton; a $1 million Toronto apartment; and housing developments in the Ontario centers of Ancaster, Levack, Dixie and Kitchener.

Other major items include a bridge, a dock and a grain elevator, all in Vancouver; a $1 million sewage disposal plant in Oshawa; a $2 million factory and 43 office buildings in Toronto; and a $2.6 million airport in St. Johns, Nfld.

(*Continued on page 31*)

where ANACONDA *Bronze contributes enduring beauty:*

Temple in Illinois



BAHÁ'Í HOUSE OF WORSHIP, Wilmette, Illinois. Louis J. Bourgeois, original architect for *exterior*. Shaw, Metz and Dolio, architect for *interior*. George A. Fuller Company, general contractor.

THIS IMPRESSIVE TEMPLE was started in 1920 by members of the Bahá'í faith to express Bahá'í teachings in progressive revelation and spiritual unity of East and West.

In the doors and windows of each of the nine sides of this Temple, the beauty of ANACONDA Architectural Bronze will outlast generations of worshippers. For no other metal surpasses bronze for monumental endurance, warmth or grace of effect. It is the oldest metal known to man — traditional in centuries of noteworthy architecture. Bronze creates the impression of stability and dignity so desirable in public, private and commercial buildings. 5203

Bronze doors and window frames in the Bahá'í Temple were fabricated by Waukegan Architectural, Inc. from extrusions and sheets. For information about ANACONDA Architectural Bronze, write The American Brass Company, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Limited New Toronto, Ontario.

One of the nine entrances (right, exterior; below, interior). Original wood and steel frames were replaced with ANACONDA Bronze. First floor took ten tons.

CANADA

(*Continued from page 32*)

Six Community Planning Fellowships Are Awarded

Six fellowships for postgraduate study in community planning during the academic year 1952–53 have been awarded.

Graham Warrington

Columbia Securities Office Building, near Vancouver, B. C., houses an Automobile Finance Company. Located on a major highway, in a typical ribbon development with competing neon signs, it relies on simplicity of design for attention. Architect is Duncan McNab, Vancouver

Winners of the prizes, offered by Central Mortgage & Housing Corp., are: F. Gerald Ridge, M.A., of Hamilton, Ont.; Earle A. Levin, B.Arch., of Winnipeg, Man.; M. B. M. Lawson, B.Sc., of Vancouver, B. C.; Zane Bakun, B.Sc., of Winnipeg, Man.; W. P. Paterson, B.A., B.S.W., of Vancouver, B. C.; Hugh Owen (diploma from Architectural Association of London), Toronto, Ont.

Mr. Lawson and Mr. Owen will do their postgraduate work at the University of Toronto. Mr. Ridge will study at McGill, Mr. Paterson and Mr. Levin at the University of British Columbia, and Mr. Bakun at the University of Manitoba.

The purpose of the fellowships, which are worth $1200 each, is to aid students in receiving advanced training in community planning and allied fields which will enable them to enter practice either privately or in public service work. The funds are provided under Part V of the National Housing Act, which permits grants for housing research.

New Type of Concrete Trusses In First Canadian Appearance

Eight reinforced concrete Vierendeel trusses, the first of their kind in Canada, have been employed in the construction of a new bottling plant for John Labatt Ltd., London, Ont., brewers.

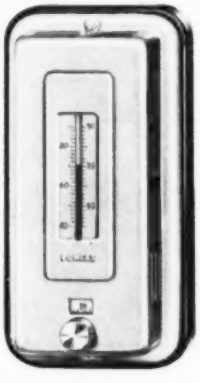
The trusses were used to span a 38-ft tank room and at the same time support a mezzanine floor and another floor with

(*Continued on page 36*)

DUKE UNIVERSITY CLASSROOM and ADMINISTRATION BUILDING, Durham, N. C.

Architects: Office of HORACE TRUMBAUER • WILLIAM O. FRANK • W. EDWARD FRANK, Philadelphia, Pa.

Consulting Engineer: WM. M. WALLACE II, Durham, N. C. • Heating Contractors: DURHAM PLUMBING & HEATING CO.



145 Powers Type D Thermostats used here with single knob limited temperature adjustment. When room is vacated for the day occupant turns dial to word "OFF". Note its simplicity and small size: H. 5⅝", W. 2⅞", Depth 2⅛".

Powers Radiator Control Valve

In Prominent Universities —

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is selected to provide the comfort and fuel economy which result from the elimination of overheated rooms.

In Duke University's beautiful new Classroom and Administration building the heating system will be automatically regulated by 145 Powers individual room thermostats controlling 236 radiator valves on convectors and direct radiation.

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THE RECORD REPORTS

CANADA

(*Continued from page 34*)

a heavy machinery load. The lack of diagonal members in the Vierendeel girder permitted a large amount of heating, plumbing, process piping and air conditioning ducts to be put through it.

Architects on the $2 million project were Harley, Ellington & Day Inc., of Detroit and John M. Watt & Associates, London, Ont. Structural engineers were C. C. Parker & Associates, Hamilton, Ont.; general contractor was John Hayman & Sons Co. Ltd., London, Ont.

F. Forsythe Jr.

Thesis-project design of small hospital and chapel, above, won 1952 Pilkington Traveling Scholarship for Roger Moranville of McGill University. Given each year to a graduating student of a Canadian architectural school, it is worth $1500 plus traveling expenses to and from England. Jury for this year's competition, shown below, included Toronto architects George Pokorny, J. C. Parkin and L. E. Shore.

How to Build A Third Bedroom into A Two-Bedroom House

There's really nothing to it when you use "Modernfold" doors as *movable walls.* When you want to add length to your living room . . . fold "Modernfold" doors out of the way against the wall.

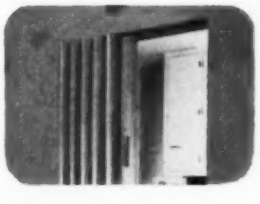
And when you want a private sitting room . . . another bedroom or guest room . . . just close the "Modernfold" door. This "Modernfold" freedom to control the size and number of rooms has been used to good advantage by builders all over the country.

Your ideas come to life . . . for life with "MODERNFOLD" doors

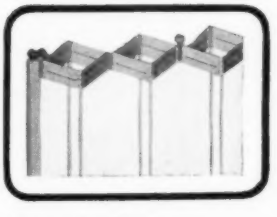
For every room division or door closure problem, there's a simple, economical, space-saving solution. That's "Modernfold," the original folding door.

Specifying "Modernfold" doors keeps clients happy. For these steel-framed, vinyl-covered doors can't be equaled *anywhere* for quality of design . . . for quality and strength of materials.

And because this line is *complete,* you're sure to save time and get exactly what you want when you specify better looking, easier operating, longer lasting "Modernfold" doors.



Better Looking
Fabric covering conceals all operating mechanism. No cornice needed. Adjustable trolleys keep doors hanging flush to jamb.



Longer Lasting
Balanced hinge construction both top and bottom. Trolleys attached at hinge intersections. No sidewise twist or pull possible.

Better Background
Over 100,000 "Modernfold" doors now in operation—a backlog of space engineering experience that's your guarantee of satisfaction.

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By Ernest Mickel

BRAB STARTS NEW PHASE OF CONSERVATION STUDY

DPA Contract Renewal Turns Efforts to Implementing Basic Recommendations

IMPLEMENTATION is the watchword in this second year of the Building Research Advisory Board's research on conservation in building construction for the Defense Production Administration.

BRAB is now seeking ways to put into practice the findings of its first year's study, as presented to DPA June 30 in a rather monumental report including some 200 separate recommendations.

Two important approaches will be contacts with technical bodies on standards to enlist cooperation in translating the specific recommendations on standards into concrete action; and efforts to promote establishment of the Federal inter-agency mechanism urged by the BRAB report to encourage cooperation of government construction agencies on conservation matters.

Evaluation of the Report of the President's Materials Policy Commission as it relates to the problem of conservation in building may also be part of BRAB's project; and an attempt may be made to set up a set of principles to guide conservation in real emergencies.

BRAB Executive Director William Scheick indicated the Board would continue to consult the same advisory personnel and add some new ones for the second part of the study.

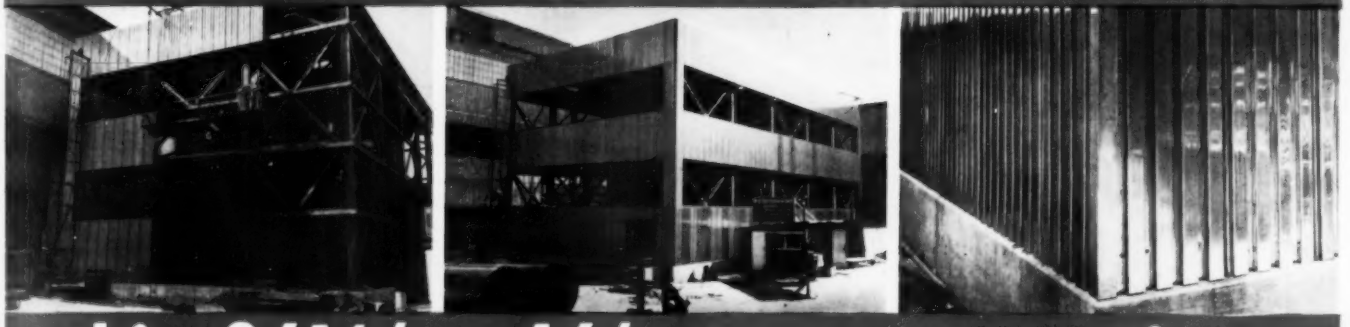
(*Continued on page 288*)

WALTER GREENE HEADS FHA

WALTER L. GREENE, the new commissioner of the Federal Housing Administration, has been with FHA since its inception in 1934, when he became administrative officer in the Birmingham, Ala., insuring office. He went to Washington in May 1937 as a supervisor in the Underwriting Division of FHA. In 1945 he was named zone commissioner in charge of 11 western states, Alaska and Hawaii. Since 1947 he has been deputy commissioner and chairman of the Finance Committee.

Commissioner Greene succeeds Franklin D. Richards, who resigned June 11 to open a brokerage office in Washington.

# of U·S·S 17 (type 430) Stainless Steel



this 86½′ x 46′ steam generating

ARCHITECT-ENGINEER:
Gannett, Fleming, Corddry & Carpenter, Inc., Harrisburg, Pa.

GENERAL CONTRACTOR:
R. S. Noonan, Inc., York, Pa.

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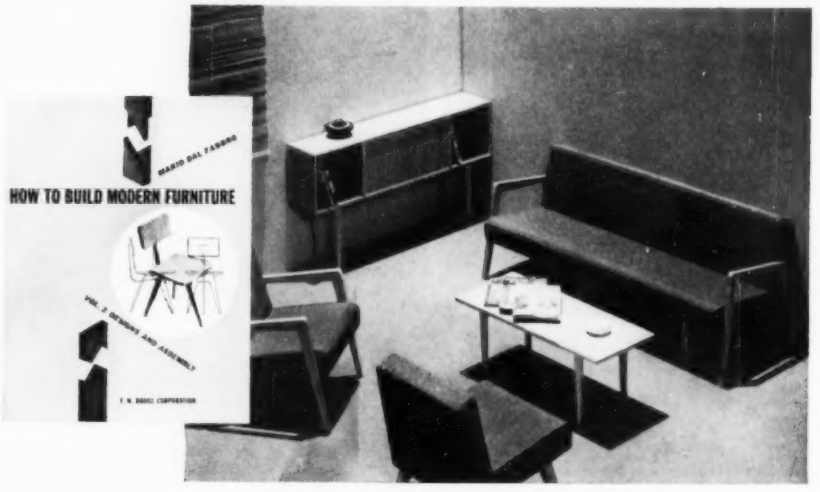
BUILDING MODERN FURNITURE



How to Build Modern Furniture. Volume II — Designs and Assembly. By Mario Dal Fabbro. F. W. Dodge Corporation (New York, N. Y.), 1952. 8½ by 11 in., 160 pp., illus. $6.00.

REVIEWED BY MORRIS KETCHUM, JR., A.I.A.

This is a picture book. Straightforward instructions briefly point the way; drawings and models are the real text. The story starts with the home woodworker's tools and equipment. Brace and bit, plane and saw, clamps, marking devices, gauges, chisels, drills, workbenches and a completely equipped home workshop are analyzed as to form and function. The next section demonstrates the use of these tools: the right way to lay out full size drawings, to mark material for cutting, to saw, plane, chisel, glue, nail, sandpaper and finish woodwork. Basic furniture design in relationship to its use and to the size of the human body follows. This section shows standard measurements for nearly every type of furniture commonly used in the home. The final section, which makes up the greater part of the volume, gives complete instructions for building 60 different pieces of furniture. Perspectives, photo of scale models, elevations, "exploded" assembly drawings and text show how to apply the information and advice contained in the first part of the book. Everything looks easy but, as in any craft activity, time and tears must be added to the final formula. For those enthusiasts well equipped with talent, time and patience, the effort will be rewarding.

All this adds up to a superb guide for amateur woodworkers. They will no longer need to rely on those hackneyed handbooks which attempt to turn them — overnight and without the right tools — into bad copies of eighteenth century craftsmen. Too many eager amateurs have wasted their energy producing fake antiques. Thanks to Mario Dal Fabbro, their spare productive hours can now be spent in building simple, practical and handsome furniture appropriate to the tools at hand and to today's living. The home workshop, in today's house, has left basement gloom for first floor light, air and sunshine. It is only fitting that its owner should also leave behind the insanities of amateur "basement borax" furniture.

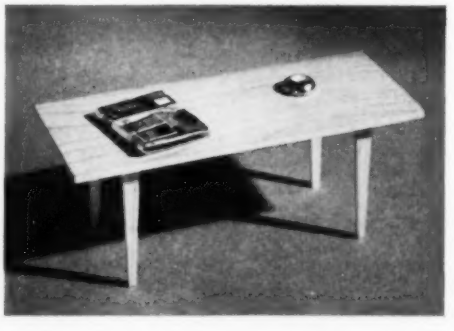
Above and beyond this expert guidance for amateur craftsmen, "How To Build Modern Furniture" offers professional designers — cabinetmakers, interior designers, architects — an authoritative reference work. To be sure, the scope of reference is limited to a single material — wood. Many other materials used in the manufacture of furniture, including plastics and metals, which have been described in Volume I, are necessarily excluded from Volume II as

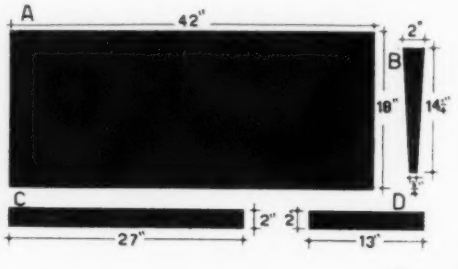
(Continued on page 48)

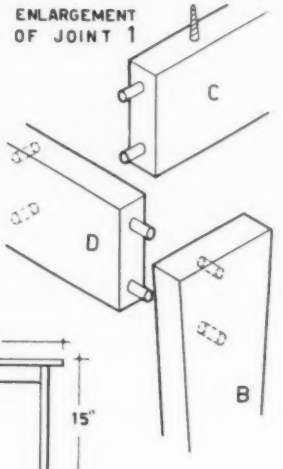
Typical page, below, gives details for coffee table shown in room setting above. From "How to Build Modern Furniture"

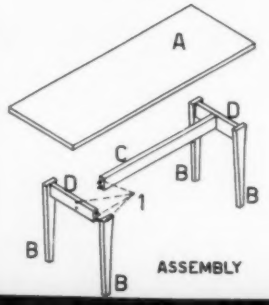
COFFEE TABLE

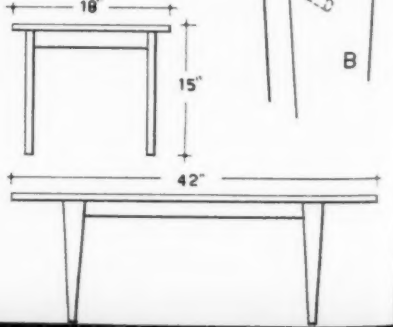
LIST OF MATERIALS.
A — 1 PIECE ¾" THICK AND 42" x 18".
B — 4 PIECES 1" THICK AND 14¼" x 2".
C — 1 PIECE 1" THICK AND 27" x 2". D — 2 PIECES 1" THICK AND 13" x 2". FOR GENERAL INSTRUCTIONS SEE PAGE 54. AFTER MATERIAL IS READY FOR ASSEMBLING PROCEED AS FOLLOWS.
JOIN (1) "B" WITH "D" (2) "D" WITH "C", (3) "A" WITH "C,D." NATURAL FINISH IS SUITABLE. SEE PAGE 14.







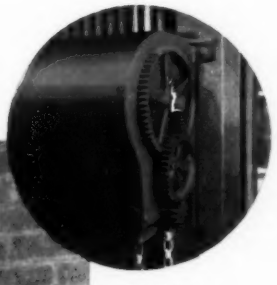




Midori Photographs

Rolling Steel DOORS

Manually, Mechanically, or Power Operated



MAHON CHAIN-GEAR OPERATOR

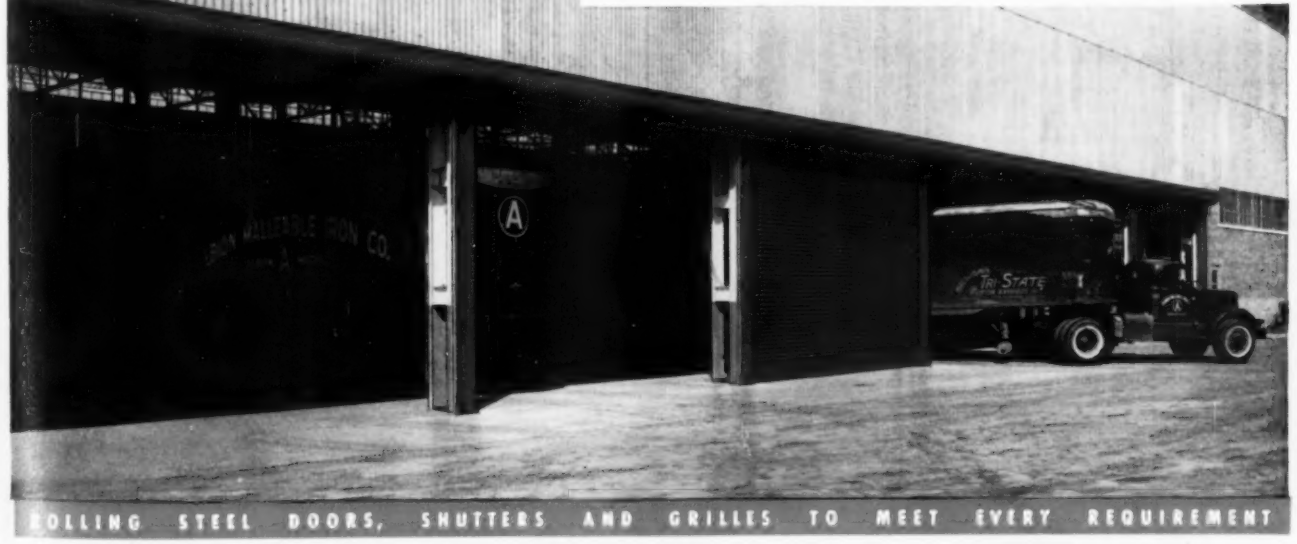
MAHON STANDARD POWER OPERATOR 920-P

Illustrated below you see six Mahon Power Operated Rolling Steel Doors installed in the openings of a combination truck and rail shipping dock. The power operators are located inside with through-the-wall drives. A continuous hood over the roller shafts and operating mechanisms extends the entire length of the six truck openings. This is another typical installation where no other type of door would serve the purpose—because, the vertical roll-up action of a Rolling Steel Door eliminates overhead obstructions—occupies no usable space inside or outside the opening. All-metal construction provides permanence, greater security, and assures you a lifetime of trouble-free service. When you select Rolling Steel Doors, it will pay you to compare both specifications and price tags . . . you will find that the hot-dipped galvanized curtain slat material that goes into Mahon Rolling Steel Doors is chemically cleaned, phosphated and treated with a chromic acid solution to provide paint bond, and that the protective coating of synthetic enamel is baked on at 350° F. prior to roll-forming. This is just one of the extra value features of Mahon Rolling Steel Doors. See Sweet's Files for complete information including Specifications, or write for Catalog G-53.

THE R. C. MAHON COMPANY

Detroit 34, Michigan • Chicago 4, Illinois • Representatives in all Principal Cities

Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled Rolling Steel Doors and Fire Shutters; Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms.



ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Six Mahon Power Operated Rolling Steel Doors 18'-7" x 14'-0" installed in a new building built by the Austin Company for the Albion Malleable Iron Works, Albion, Michigan. Another Mahon Power Operated Door 17'-0" x 22'-0" is installed in a railroad opening in the end of this enclosed loading dock.

MAHON

REQUIRED READING

(*Continued from page 46*)

beyond the range of the home workshop. Also excluded, for the same reason, are examples of the superb craftsmanship, the fine woods and the creative fire of our top flight professionals. This is box-furniture, sturdy in scale, its members oversized against error, its whole technique rightly suited to simple skills and simple tools. In spite of this, or because of it, all the basic principles of good furniture design are neatly summarized for discerning eyes in its pages. Based on this, the professional can take off to more refined and complex objectives. Even more important, he can use this information as a sure guide for proportioning spaces, rooms and houses designed for contemporary living.

This volume is another important link in the chain which stretches between the Victorian revolt of William Morris and the contemporary craftsmanship of George Nagashima. With all proper respect to its publisher's intentions, it is to be hopefully desired that some day a popular edition may appear on every newsstand and drug store counter.

VOCABULARY FOR ARCHITECTS

Dictionary of Architecture, by Henry H. Saylor, F.A.I.A., John Wiley & Sons, New York, 1952. 4 by 6½ in. 221 + 5 pp. $4.50.

This pocket-sized book contains slightly over 4000 definitions and 16 plates of illustration. Pronunciation of difficult words is given in phonetic rather than diacritical form, while the pronunciation of obvious words is omitted. There is no cut-in thumb index, which might have added convenience to the volume's usefulness.

The proportion of historical to current terms is rather heavily weighted towards the former, but such a coverage is extremely rewarding to students and historians. Future editions might be made more comprehensive for the working architect by the addition of a wider range of contemporary expressions such as prestressed concrete, vinyl, split-level, etc. — terms which are everyday usage in the profession. The illustrations might also be updated to include a more extensive inclusion of *au courant* forms. Among the definitions are a few well known trade names while corresponding trade names of competing products have been omitted.

(*Continued on page 376*)

RESEARCH LABORATORIES, SCHOOL OF MEDICINE, WASHINGTON UNIVERSITY, ST. LOUIS, MISSOURI

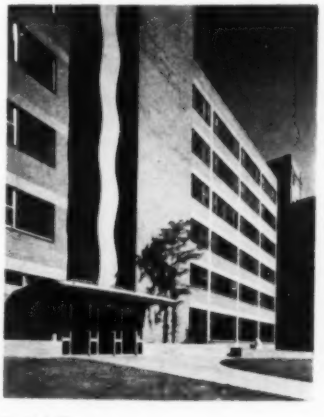
Harris Armstrong, Architect

Ferriss & Hamig, Mechanical Engineers

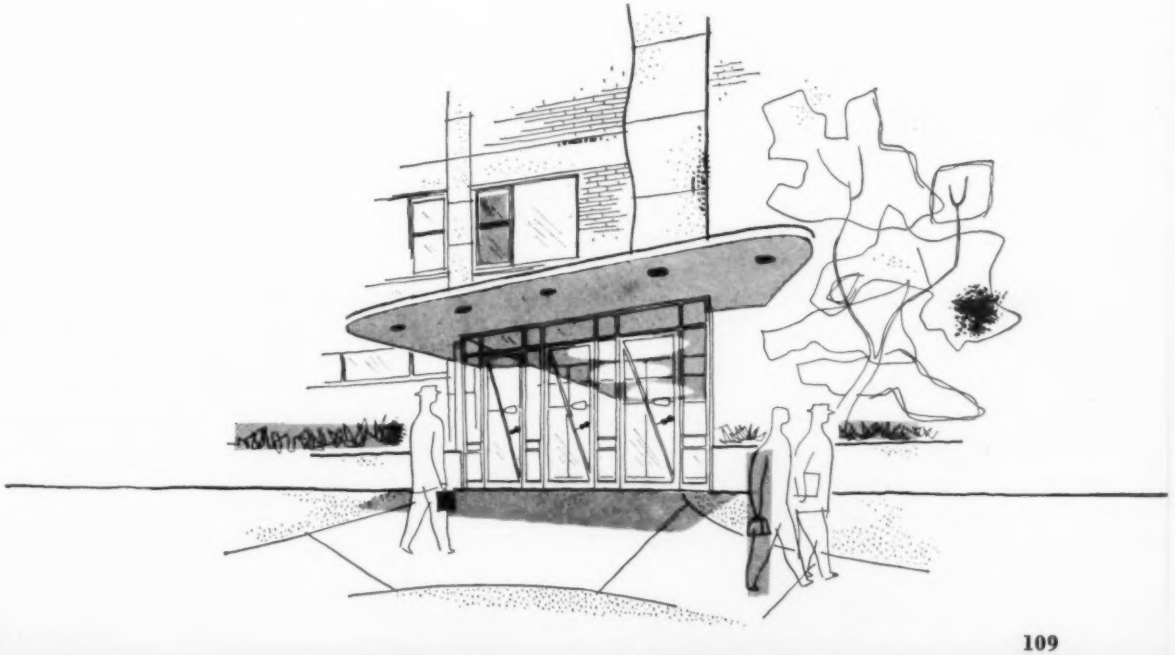
Thomas D. Church, Landscape Architect

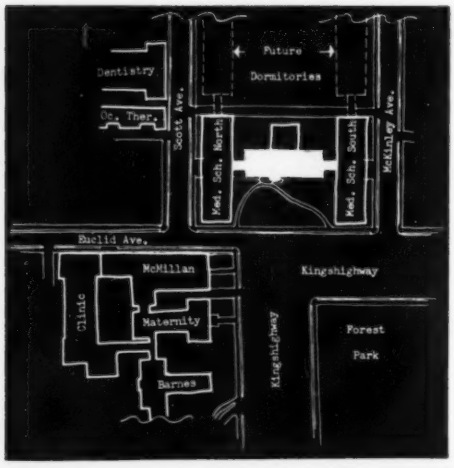
THE MEDICAL SCHOOL of Washington University was housed in two parallel four-story buildings 200 ft apart that were built during the first decade of the century. Traffic between the buildings traveled through a one-story corridor which formed the center bar of an "H" plan. The time wasted in descending to the ground floor to get from one building to the other dictated that the new laboratories building, in addition to its other functions, should serve as a continuous bridge at all levels and unite the two buildings into a complete, self-contained medical school.

Across the street from the medical school buildings is a large group of hospitals affiliated with Barnes



Hedrich-Blessing





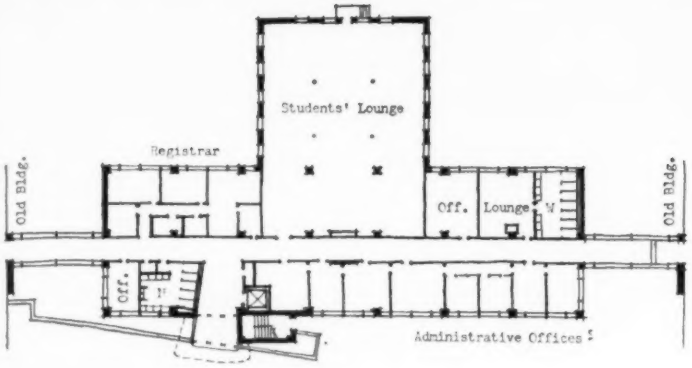
RESEARCH LABORATORIES WASHINGTON UNIVERSITY

Left: site plan. Below: view from Kingshighway; this is the west façade. Facing page: glass-walled corridor

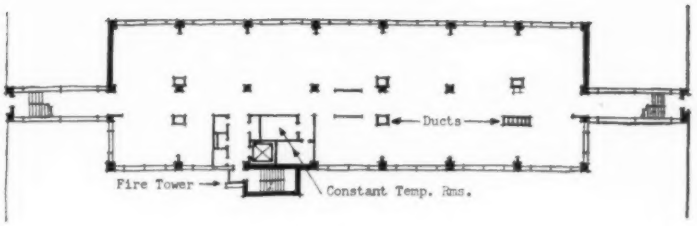
Hospital — Maternity, Childrens', Macmillan and Barnard as well as several other medical and research institutions.

Since the west-facing building was thus adopted for many compelling reasons, and since the west sun in St. Louis is formidable, utilities, elevators, stairs, etc. are located on this side and the windows are glazed with heat resistant glass. The bay depth on the east side is increased since this is the most desirable area. The layout is strikingly similar to the typical long, narrow tower floor of many recent office buildings.

The old buildings had very high ceilings, which accounts for the various stairways that occur in the glass-enclosed connections between the new and old structures. The new building is of reinforced concrete with the structural frame protected by, yet expressed in, Indiana limestone. The panels are filled in with brick and aluminum-framed windows.

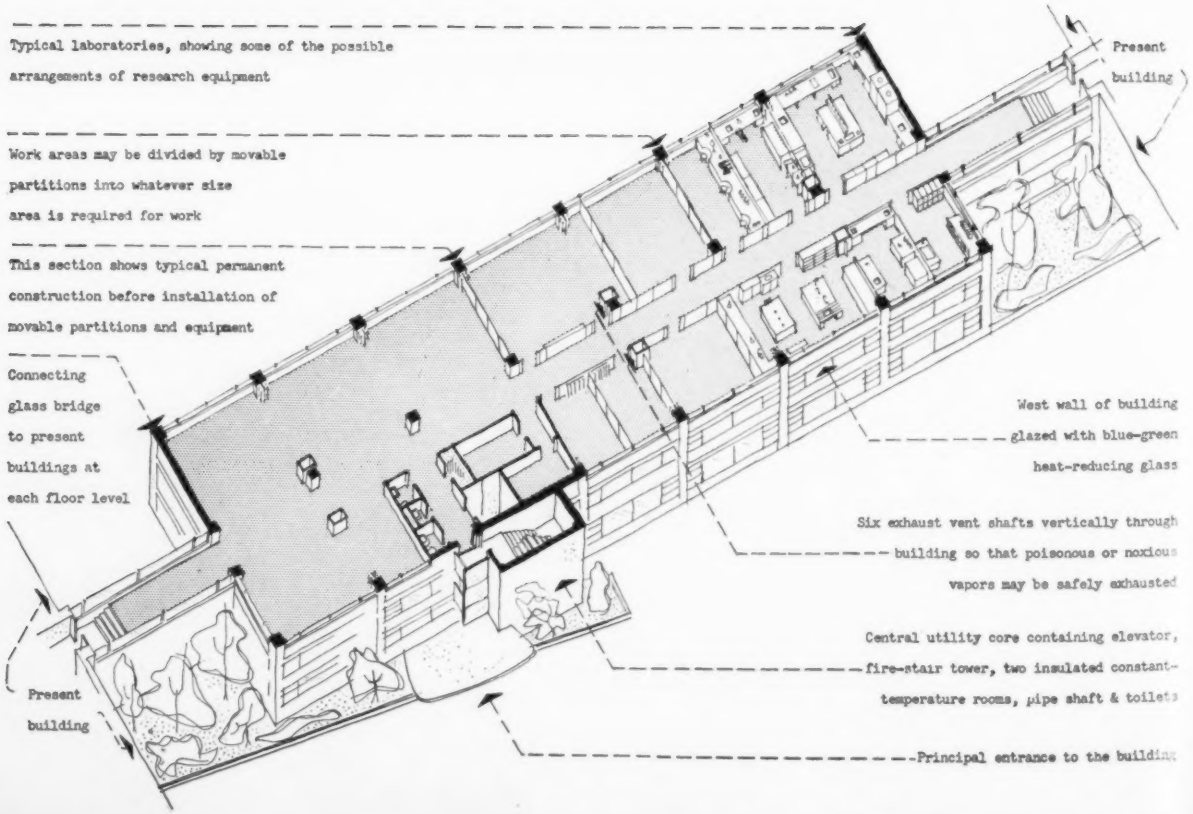


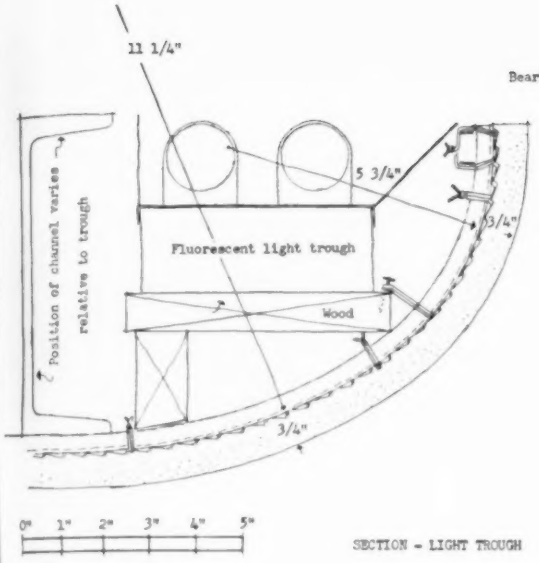
First floor



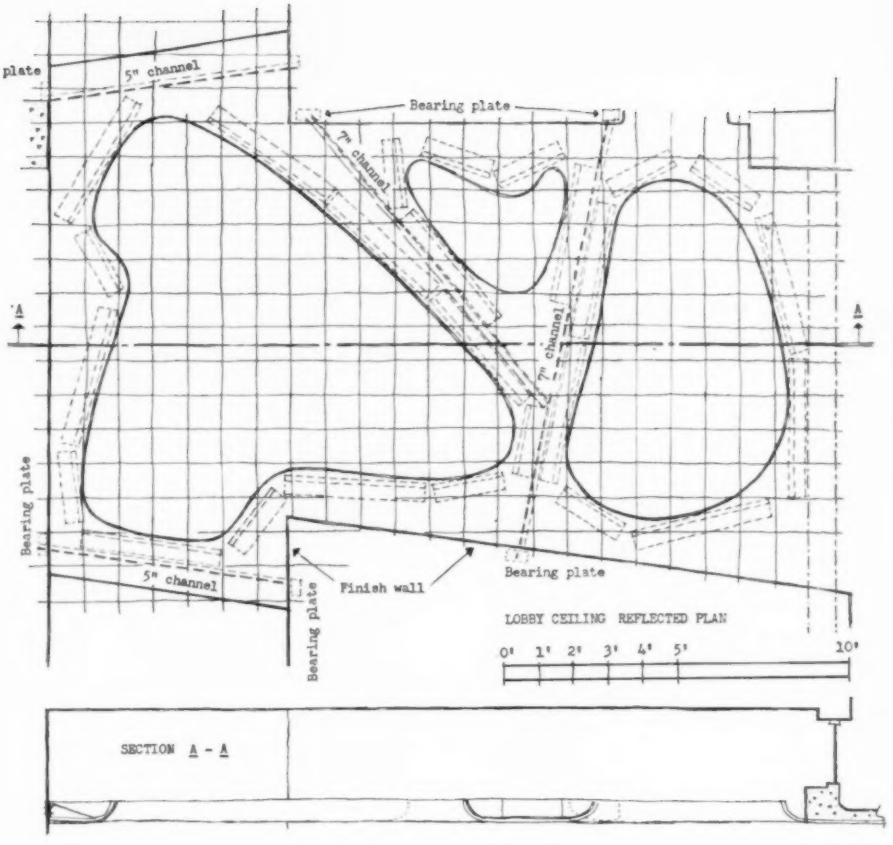
Typical floor

Hedrich-Blessing


Typical laboratories, showing some of the possible arrangements of research equipment
Work areas may be divided by movable partitions into whatever size area is required for work
This section shows typical permanent construction before installation of movable partitions and equipment
Connecting glass bridge to present buildings at each floor level
Present building
Present building
West wall of building glazed with blue-green heat-reducing glass
Six exhaust vent shafts vertically through building so that poisonous or noxious vapors may be safely exhausted
Central utility core containing elevator, fire-stair tower, two insulated constant-temperature rooms, pipe shaft & toilets
Principal entrance to the building



SECTION - LIGHT TROUGH



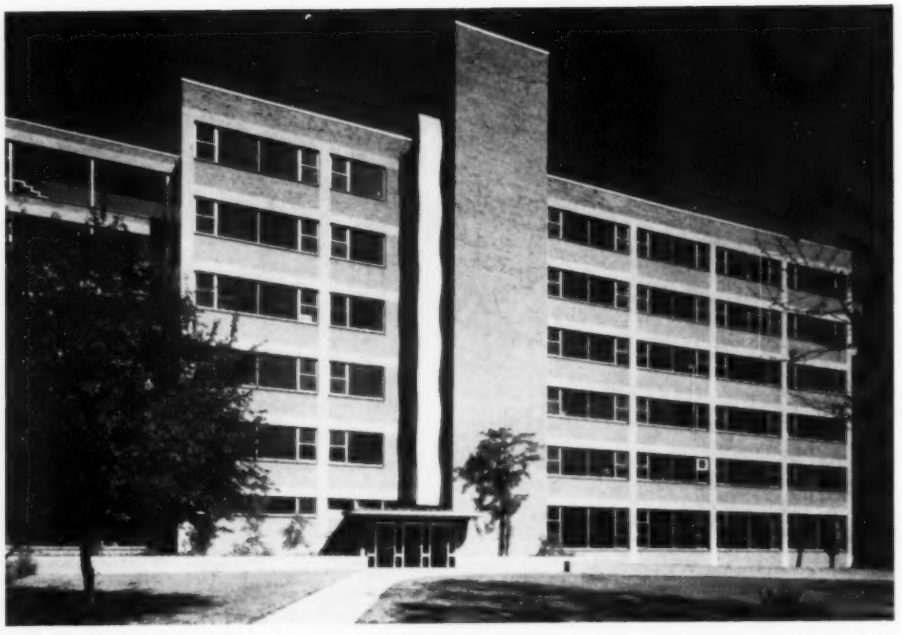
Hedrich-Blessing

RESEARCH LABORATORIES

WASHINGTON UNIVERSITY

Since an inevitable result of research is change, it was early determined that as far as possible, partitions and equipment should be demountable and interchangeable. This led to standardized bays and locations for all services, which include hot and cold water, compressed air, vacuum, gas, steam, 110 and 220 v AC and 110 v DC current, exhaust duct connections. All services are exposed. Each floor has two constant-temperature rooms which may be warm, cool or cold. Several bays, equipped to handle atomic materials used in medical research, have independent ducts to dispose of wastes safely. Photo and details at right and above: sculptured ceiling in lobby was formed by lathers and plasterers from scale and full-size details

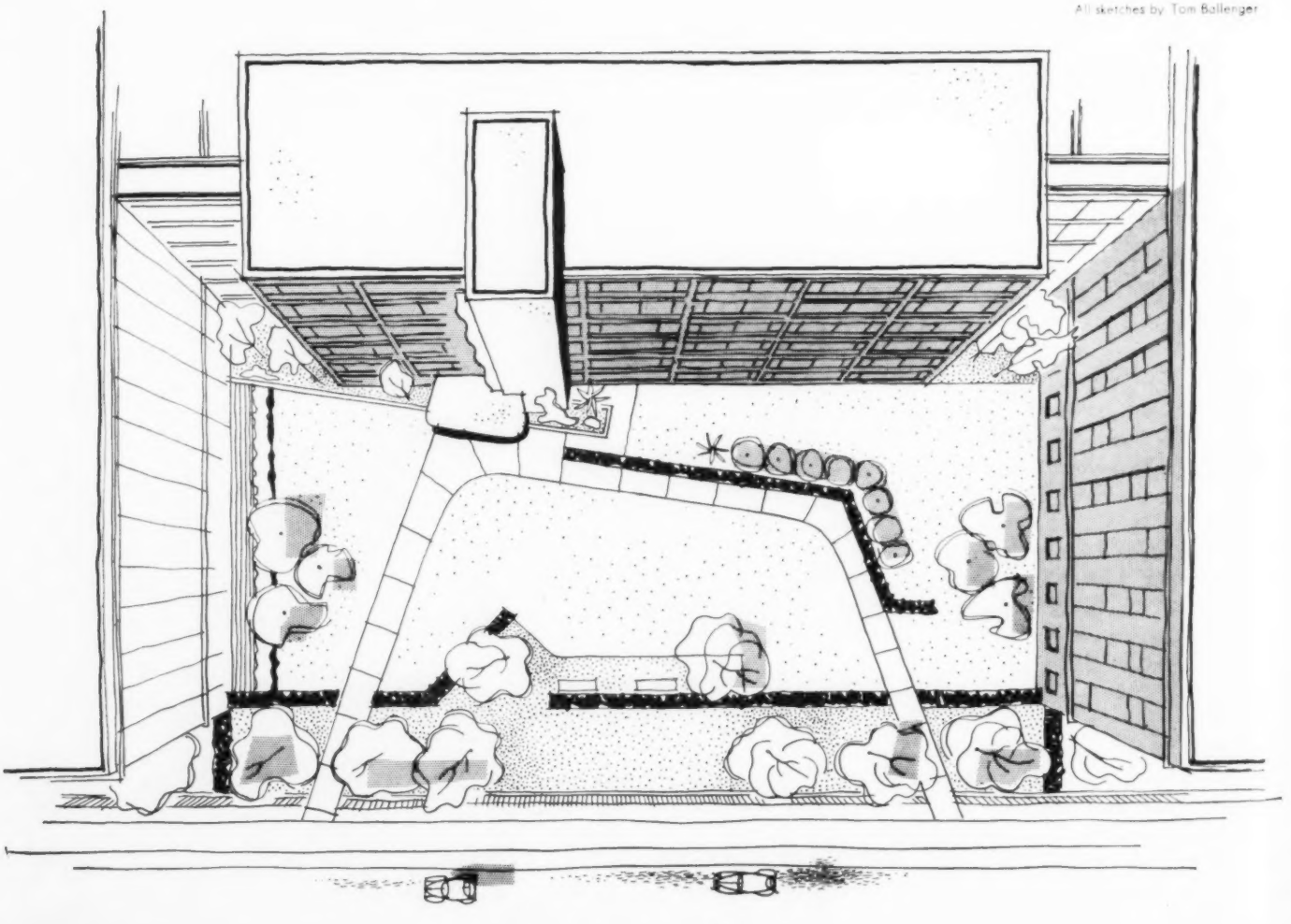
RESEARCH LABORATORIES
WASHINGTON UNIVERSITY



Hedrich-Blessing

Window-washing problems were solved by tracks permanently secured to window heads. Each track has two rolling carriers to which window-washer's harness is snapped, enabling washer to start at one operable sash and work across to the other. Below: landscaping of entrance court was designed by Thomas D. Church

All sketches by Tom Ballenger



"... when we speak of the 'modern woman' . . ."

The Bettman Archive

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"THE END OF THE MODERN MOVEMENT IN ARCHITECTURE"*

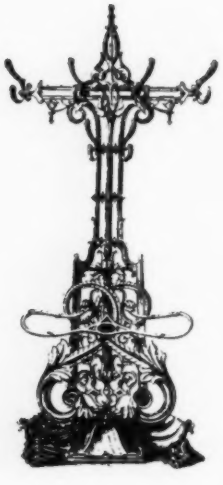
By Osbert Lancaster

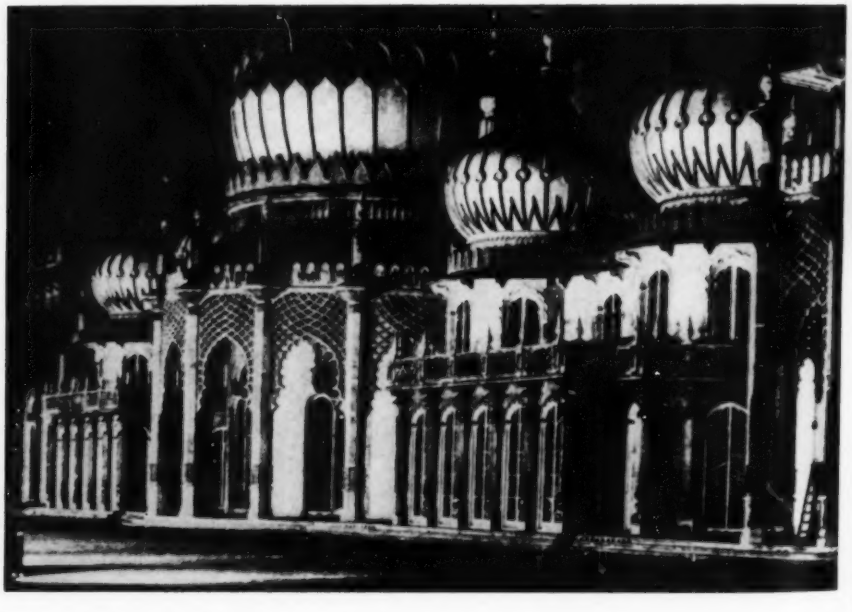
MODERN is probably one of the most ambiguous and certainly one of the most variously employed words in the English language. Unlike most adjectives, so far from defining or expanding the meaning of the noun to which it is attached, its own meaning is entirely governed by the word which follows it.

Thus when we speak of "the modern woman" we summon up a vision of some South Kensington Hedda Gabler, all shirt-waist and pince-nez, peddling madly round Battersea Park thinking about Mrs. Sidney Webb. If, on the other hand, we say "modern girl" this vision is replaced by a tubular siren showing acres of very shiny pink-silk stockings rhythmically jigging to the strains of "Yes, Sir, that's my baby." When employed in connection with art or architecture,

* Originally a BBC broadcast, the article is reprinted by permission from the *Listener*

". . . early Cubism by Metro-Goldwyn-Mayer . . ."



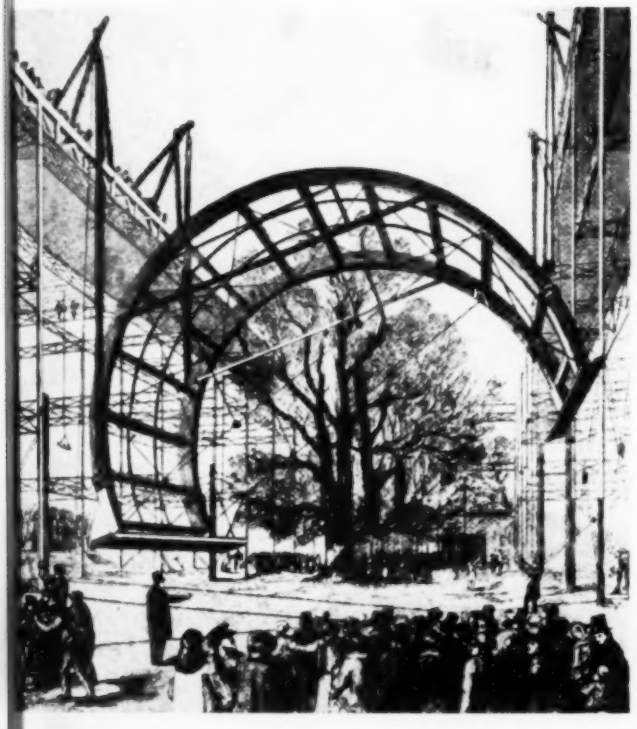


". . . proclaimed the doctrine of salvation through decoration . . ."

modern retains all its period flavour and may mean anything except contemporary. In ordinary usage the phrase "modern painting" is now practically confined to works produced in Paris between the emergence of Van Gogh and the coming of Surrealism; while "Modern Style," particularly if pronounced in a slight foreign accent, refers to those tendencies in design which flourished in Vienna and Munich at the turn of the century.

So overburdened has this unfortunate adjective become, that we have been forced to invent derivatives such as "modernistic," a term of contempt correctly employed to describe a type of all too popular decoration out of early Cubism by Metro-Goldwyn-Mayer; or borrowing from abroad, to acclimatize a word such as *Modernismus* in an effort to distinguish English works which display a perhaps imperfect understanding of the principles enunciated at the Bauhaus. But to what precisely do we refer when we speak of the "Modern Movement"?

Thanks largely to the exhaustive researches of Mr. Morton Shand and Professor Pevsner, we know quite well when and how the modern movement started, and can follow the course of its early development. What



Complete break with the past? Building the Crystal Palace

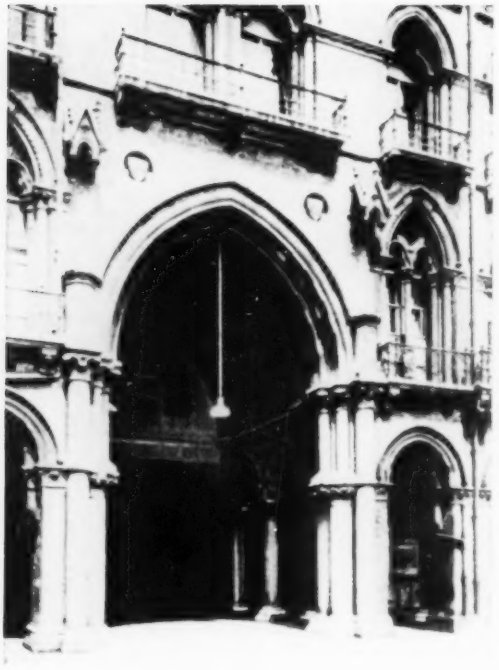
Courtesy French Information Center, Inc.

". . . romantic fun-and-games stage [of modern] . . . Maxim's Restaurant"

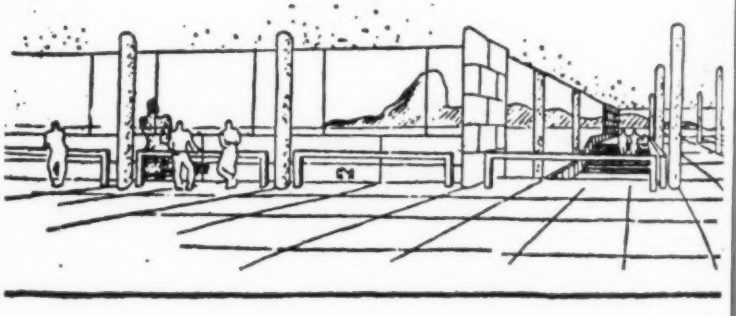
". . . the work of such men as Van de Velde . . ."

however, remains in doubt is exactly where we, and it, stand today. Does 1951 mark the final triumphant flowering, or just a further stage on the upward march, or the end of the whole thing and the beginning of something quite new? Is Mr. Hugh Casson, for example, an Alberti or a Bernini? The rest of my remarks here will be largely directed towards encouraging the last assumption.

It was generally proclaimed by the fathers of the modern movement that it represented a complete break with the past, and in so far as it was directed towards the abolition of "style," as generally understood, it could not possibly be compared with any other historical architectural school. This contention, which is of course commonly made by all artistic pioneers at all periods, we will treat with the contempt it deserves, and draw what I hope may be a helpful parallel with the history of the Gothic Revival. I choose the Gothic Revival not in order deliberately to infuriate supporters of the Modern Movement, still less the rather smaller circle of Gothic Revivalists, but because not only has it a clearly defined beginning, middle and end, but thanks to Mr. Betjeman and Sir Kenneth Clark, its history is now generally familiar. And, moreover, the moment



Courtesy: English Speaking Union

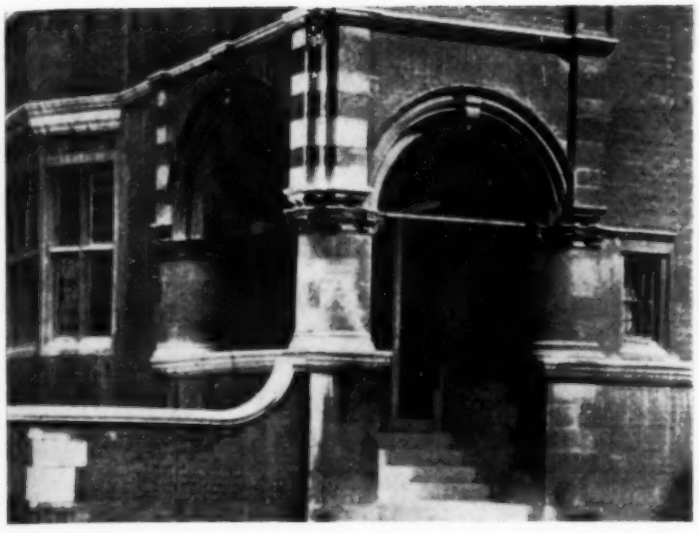


". . . similarity between the rôles played by Sir Gilbert Scott and Le Corbusier, although perhaps less immediately striking, is none the less considerable . . . probably did more than any of their contemporaries not only to put their respective movements in the limelight, but keep them there." Above, St. Pancras Station, by Sir Gilbert Scott. Right, some drawings by Le Corbusier

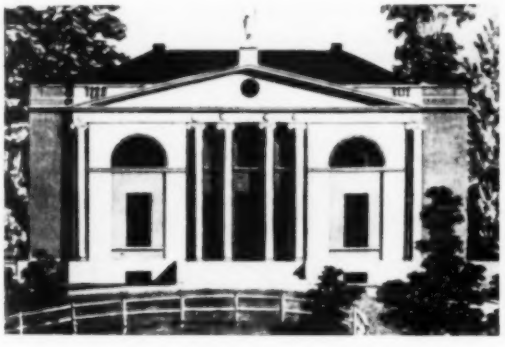
one begins to make the comparison one is immediately struck by some curious parallel.

Both movements started with what one may perhaps describe as a romantic fun-and-games stage, represented in the case of the Gothic Revival by Strawberry Hill and Fonthill, and in the case of the Modern Movement by such works as the interior of Maxim's Restaurant in Paris and Horta's house in the Rue de Turin. Then, after a short period of settling down, when the early exuberance had slightly diminished, represented in the one case by the Commissoners' Churches and in the other by the buildings of Voysey or Berlage, comes the doctrinaire period, all manifestos and witch-hunts. Pugin dismisses all the work of his contemporaries and predecessors as trivial, worthless, and based on a complete misunderstanding of the principles involved, and assisted by the Camden Society lays down the new law; Gropius and Loos do the same for Art Nouveau and the Jugendstil and the work of such men as Van de Velde. And in both cases it is at this moment that the movement, hitherto purely architectural, tends to become involved in extra-curricular activities — in the one case tractarianism, in the other social planning. Then comes the high summer in both cases marked by the emergence of the twin-figures of the Prophet and Publicist.

Here, however, ensues a curious reversal of rôles, for in the one case the Prophet exerted his influence through the medium of words and in the other chiefly by practical example, but, nevertheless, the points in common between Ruskin and Frank Lloyd Wright are fundamental, the differences largely superficial. Both men, it seems to me, tower head and shoulders above all their fellows; the thoughts and outlook of both are deeply coloured by an evangelical background; and both, it must be admitted, exhibit aspects at which it is



". . . Norman Shaw's experiment . . . provoked a storm of criticism . . ."



The Bettman Archive

". . . soulless barrenness of late eighteenth century . . ."

possible for trivial minds (which at some time or other includes most of us) to laugh. In the case of the publicists, the similarity between the rôles played by Sir Gilbert Scott and Le Corbusier, although perhaps less immediately striking, is none the less considerable. Sir Gilbert, it is true, built a great deal more than Le Corbusier and wrote a good deal less, but both men were in their own ways superb showmen and knew no equal in the handling of clients, and probably did more than any of their contemporaries not only to put their respective movements in the limelight, but keep them there.

To all intents and purposes the Gothic Revival was over by the 'seventies. Dozens more Gothic buildings were erected after that decade, but either they were largely hack work, or, if of merit, exhibited features which had little to do with nineteenth-century Gothicism and heralded a coming change. The event which

". . . that Gothic was the only style for churches."
Liverpool Cathedral; Sir Gilbert Scott

". . . and in the history of the later Gothic Revival the office of G. E. Street played a rôle comparable to that of the Bauhaus in the Modern Movement"

may be held definitely to mark the end was Norman Shaw's experiment with Queen Anne; a deviation all the more important in that Shaw came from the Street stable, and in the history of the later Gothic Revival the office of G. E. Street played a rôle comparable to that of the Bauhaus in the Modern Movement. Shaw's heresy, of course, provoked a storm of criticism from the stern unbending Goths, and the curious thing is that the slight note of hysteria there detectable strangely resembles that which characterises the weighty condemnation in strong, if recently acquired, American accents delivered against that latter-day deviation from the Modern Movement known, for reasons that are not immediately obvious, as the New Empiricism.

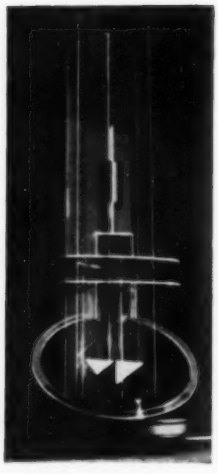
But similarities in the course of the development of two movements are not themselves, even if convincing, sufficient to indicate that they will necessarily end at the same stage or in the same way. For that, it is necessary to examine rather more closely the fundamental doctrines on which each were based. There one is at once struck by a strange fact; it is not suprising that these should be totally different but it is curious that they should be so neatly antithetical.

At all times and in all places the rôle of the architect lies between that of the plumber and the sculptor; but seldom midway. If, like the majority of nineteenth-century architects, he is an aesthetic snob, he will get as close to the sculptor as he can; if, like most contemporary architects, he is an inverted snob, he will suck up to the plumber. Thus, roughly speaking, most of the Gothic Revivalists and of the Modern Movement boys are equidistant from the centre which makes their conflicting theories almost exactly complementary, and, in my view, equally suspect. The Victorian architect, reacting strongly against what to him, and almost all his contemporaries, was the soulless barrenness of late eighteenth-century and Regency architecture, proclaimed the doctrine of salvation through decoration. His immediate successors, not unnaturally surfeited with Early English capitals, terra-cotta enrichments, and neo-Baroque swags, pronounced decoration anathema and advocated the much-needed abolition of ornament and concentration on the beauty of form. However, what tended to get overlooked in the excitement was the fact that simplicity is not enough: that whereas an ill-designed building, or teapot, or page of type may be rendered unbearably vulgar by applied decoration, in its total absence it is revealed as devastatingly mean.

REVEALING FUNCTION THROUGH FORM

But apart from these theoretical over-simplifications the most striking fact in common between the two movements was their faults, totally dissimilar as were the products. Of these, one of the most important was an ineradicable tendency to give a general validity to theories that were by their very nature particular. Thus the Goths maintained, perfectly correctly given the liturgical requirements of the Catholic faith and the prevailing intellectual climate of their time, that Gothic

Painting by William A. Bougereau; courtesy, New York Public Library



Naum Gabo: Column (space construction); The Museum of Modern Art

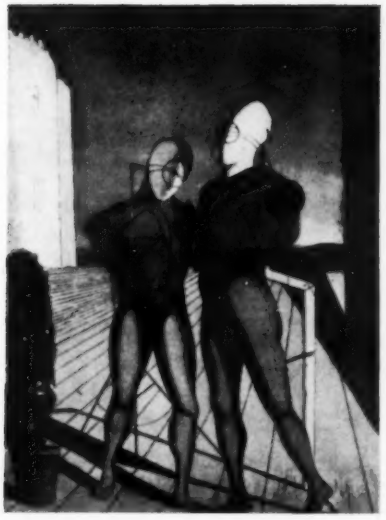
Henri Rousseau: The DREAM

"... le Douanier Rousseau ... aimed at painting like Bougereau, but happily came nowhere near his avowed intention"

was the only style for churches. Where they went wildly wrong was to advance from this premise the untenable proposition that Gothic was the only style for railway stations. Similarly the Moderns were 100 per cent correct in maintaining that crenellations and lancets were out of place on power stations in which true beauty was to be obtained only by the revelation of function through form. When they went on to apply this theory to all architecture they were still perfectly justified on paper, but almost never in practice, for the very good reason that whereas the function of a factory, or a power station, or a hospital is exactly ascertainable, there exists a whole class of buildings, including domestic, where this is only partially true, and in all monumental architecture function can be defined only in the very vaguest terms.

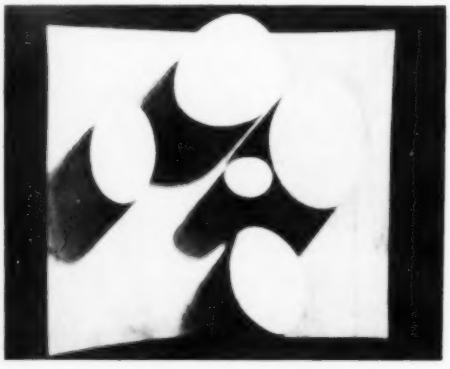
It is in their varying reactions to this last awkward fact that the leaders of the Movement reveal the existence of a schism. If one may judge from the results

Dadaism rose and faded in 1920

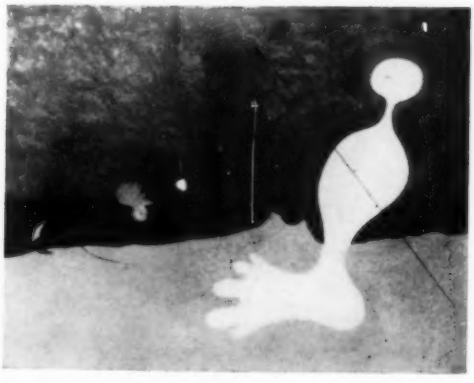


de Chirico: The Duo. The Museum of Modern Art

Picasso: Seated Woman. The Museum of Modern Art



Hans Arp: Objects arranged according to the laws of chance



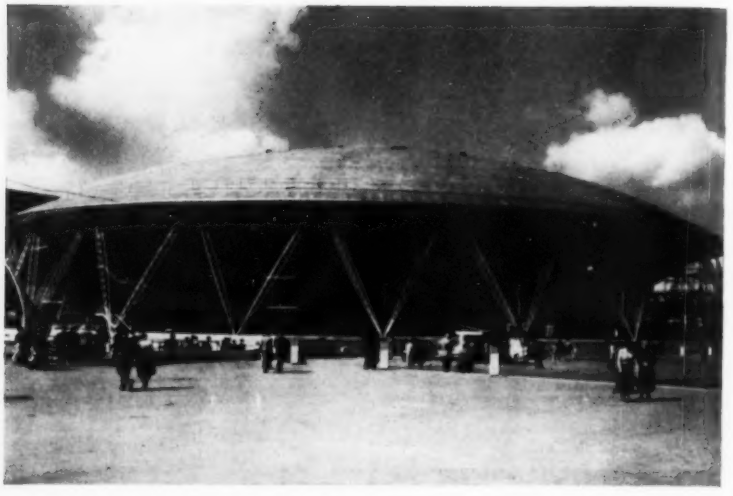
Joan Miro: Personage throwing stone at a bird
The Museum of Modern Art

". . . abstract painting was not, as some might think, a blind alley but a necessary diversion . . ."

of the symposium on monumentality recently held by the ARCHITECTURAL REVIEW — which is not altogether easy, as the gift of clear literary expression seems, with the notable exceptions of Messrs. Summerson and Mumford, to be but grudgingly extended to modern architectural writers — the purists side-step the whole question by taking refuge in sociology and saying that the very idea of monumental architecture is ridiculous, uncontemporary, and not to be encouraged: an attitude which in view of the fact that a very large proportion of the building public, including both banking corporations and commissars alike, is still crazy for monuments, and whopping big ones, is not helpful. Far more praiseworthy is the reaction of those who admit the need and go gallantly ahead in an effort to meet it; even though, as at Coventry, that effort ends in almost total failure.

Let me say at once that this failure is not in my view to be laid at the door of Mr. Basil Spence. Rather is it attributable to those responsible for organising the competition, who seemed to have but the vaguest idea of what they really wanted or what a cathedral is, an ignorance the more astonishing as the purpose and nature of a cathedral have so recently been admirably defined by the highest authority in the Archbishop of York's book on the Church of England. If they wanted a building which would combine the advantages of a glorified parish hall blown up to meet diocesan requirements with the popular appeal of a brand-new Odeon, they should have said so and not called it a cathedral. But to call in an architect trained in the functional tradition and not to have made it clear that in so far as cathedrals are concerned function is liturgy, and liturgy is function, was to invite disaster. In this bland denial of the very tenets of the functional faith the wheel has come full circle and Coventry Cathedral seems likely to be the St. Pancras railway station of the Modern Movement.

Courtesy: British Information Service



"Here [South Bank Exhibition] a hand-picked selection of the younger exponents of the Modern Movement were given a free hand to do what they liked without the necessity of making even a formal observance to theory"

MYSTIQUE OF THE MACHINE

But it is in their respective attitudes to the machine that both movements proved finally inadequate. The Goths invited disaster through fear, which so inhibited them that they were quite unable to take advantage of the mechanical revolution of their time, and finally led them into the cosy wilderness of arts and crafts. The attitude of their successors was more complicated. On the surface it was coloured by a mystique of the machine which found its earliest and dottiest expression in Marinetti and the Futurist manifesto and was later rationalised by such men as Professor Giedion. But underneath, deep down in the collective subconscious of the movement, there remained — inherited from William Morris who, it is important to remember, was a Janus figure standing exactly at the cross roads — a profound misgiving lest the price to be paid for all the manifest advantages to the consumer of "mech anisation taking command" prove disastrously high in terms of the spiritual well-being of the producer. However, further to expand this statement, with all its inevitable sociological implications, might well involve me in expressions of opinion to which in this tense pre-electoral atmosphere vile minds might attach a partisan significance.

Moreover to speak solely of failure is unjust and unhelpful, for the end of artistic movements is not commonly marked by failure but by the achievement of unintended success, which provides a springboard for fresh leaps. An extreme example of what I have in mind, drawn from modern painting, is afforded by le Douanier Rousseau. He, as we know from his correspondence, aimed at painting like Bougereau but happily came nowhere near his avowed intention. But in the process he produced a number of masterpieces of a quite different kind. Without for one moment attributing to Hugh Casson and his colleagues a comparable degree of naïvety, the view that the Modern Movement has now reached its term is far more plausibly supported by the triumphs of the South Bank than by the inadequacies of Coventry.

Here a hand-picked selection of the younger exponents of the Modern Movement were given a free hand to do what they liked without the necessity of making even a formal observance to theory. Indeed, it would have been impossible for them to do so even had they so wished, for the purpose for which exhibition buildings must, one supposes, be fit, is to exhibit, and one of the most enjoyable things about the South Bank exhibition was that there was virtually nothing of the smallest interest *to* exhibit. Thus one could enjoy the wonderful Piranesi-like drama of the interior of the Dome of Discovery, without bothering one's head, any more than one suspects did Mr. Tubbs, as to whether this imposing arrangement of ramps and moving stair-

cases was in fact the best or most functional method of displaying all the pseudo-scientific bric-a-brac with which it appeared rather hurriedly to have been filled. Similarly in other pavilions, where the exhibits ranged in exotic fantasy from a row of cows being milked to a London omnibus, one was able undistracted to concentrate on the architectural qualities of the buildings themselves. As one did so one gradually became aware in many individual cases, but not all, and in the general effect of the whole ensemble, of something quite new — of a quickening wind stirring the grim, bare branches of modernism and a wind, moreover, that was certainly not blowing from the direction of Massachusetts.

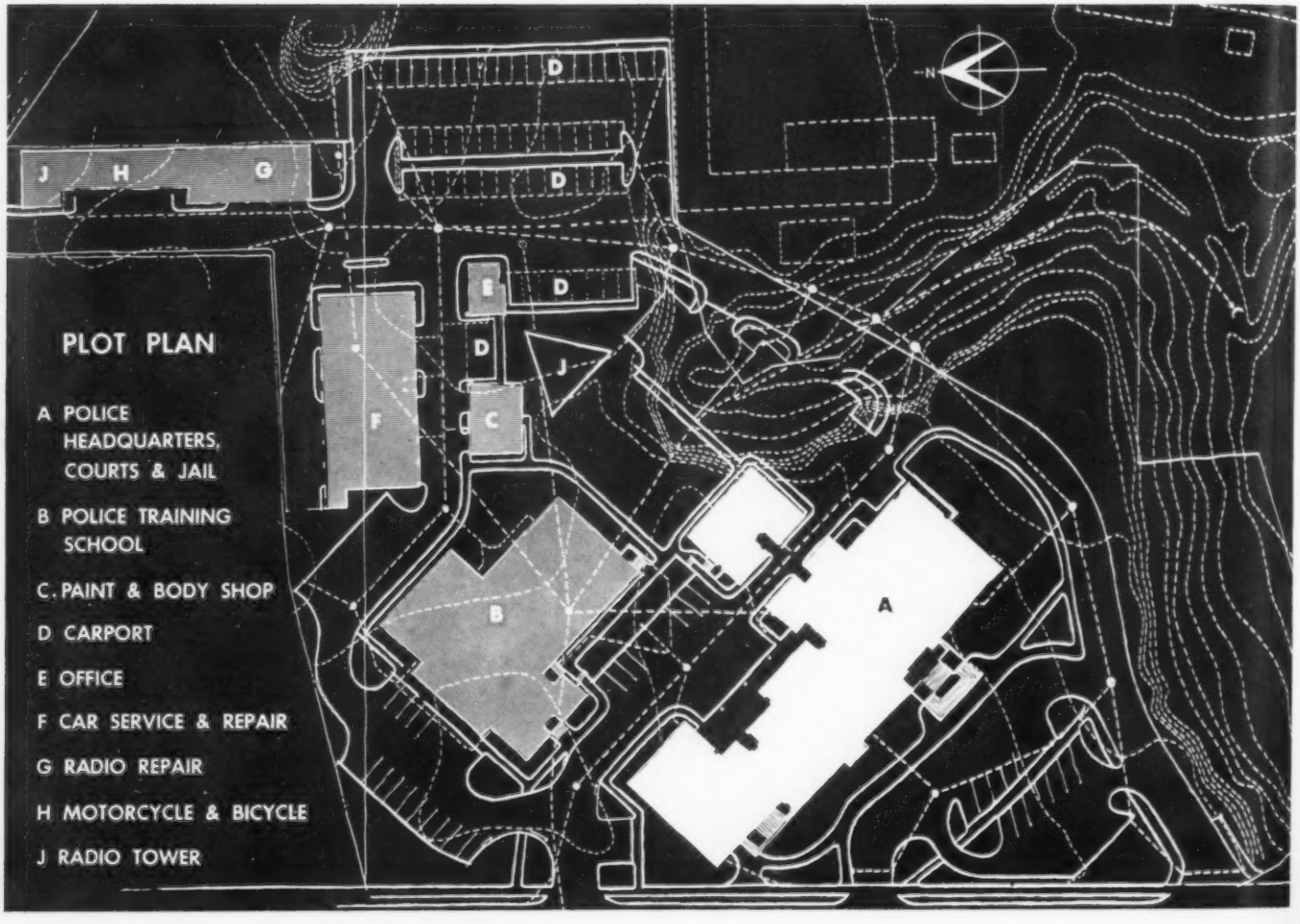
THE NEW SPIRIT IN ARCHITECTURE

Is this new spirit — which I shall not attempt to define, for definition and analysis have been the curse of modern architecture — the first swallow of a new summer, or just a belated straggler from the old autumn of the picturesque, as certain of the more austere upholders of the international style would have us believe? It is at this stage quite impossible to say, but one thing is certain. If a really live and profitable movement is to develop from this beginning, then many of the most cherished illusions of the Modern Movement will have to go overboard: that frenzied rejection of the past, for instance, that ridiculous attitude of having absolutely no connection with the period next door, which has had such disastrous effects on architectural education. Then that inhibiting fear of the *cliché* must at all costs be overcome, and it must be realised that a good supply of sound, generally acceptable *clichés* is one of modern architecture's most urgent requirements; that whereas the success of eighteenth-century architecture, for example, as of eighteenth-century poetry, lay very largely in just this invention of *clichés*, that could safely be entrusted to local builders to exploit without becoming wearisome, the failure of the Modern Movement wholly to get clear of the coterie stage was in a very large measure due to the fact that the best they could produce in the way of *clichés* was a window that turned a corner and a couple of pavement lights. Above all, the modern architect must at all costs come down from his functional tower of reinforced ivory and realise that a public which has for years been asking for half-timbered bread is not going suddenly to be satisfied with a cantilevered stone.

If, in fact, we are witnessing a new departure, then it would be churlish to conclude without paying a tribute to the stern, if sometimes inhibiting, discipline which the Modern Movement imposed. If one thinks as I do that it always remained inextricably confused between ends and means, it nevertheless fulfilled an essential task. As with abstract painting it was not, as some might think, a blind alley but a necessary diversion, and those who passed through it are likely to have travelled considerably further than those who stuck to the main road.

Elizabeth Meigs Eidlitz photo

Drawing by Tom Ballenger



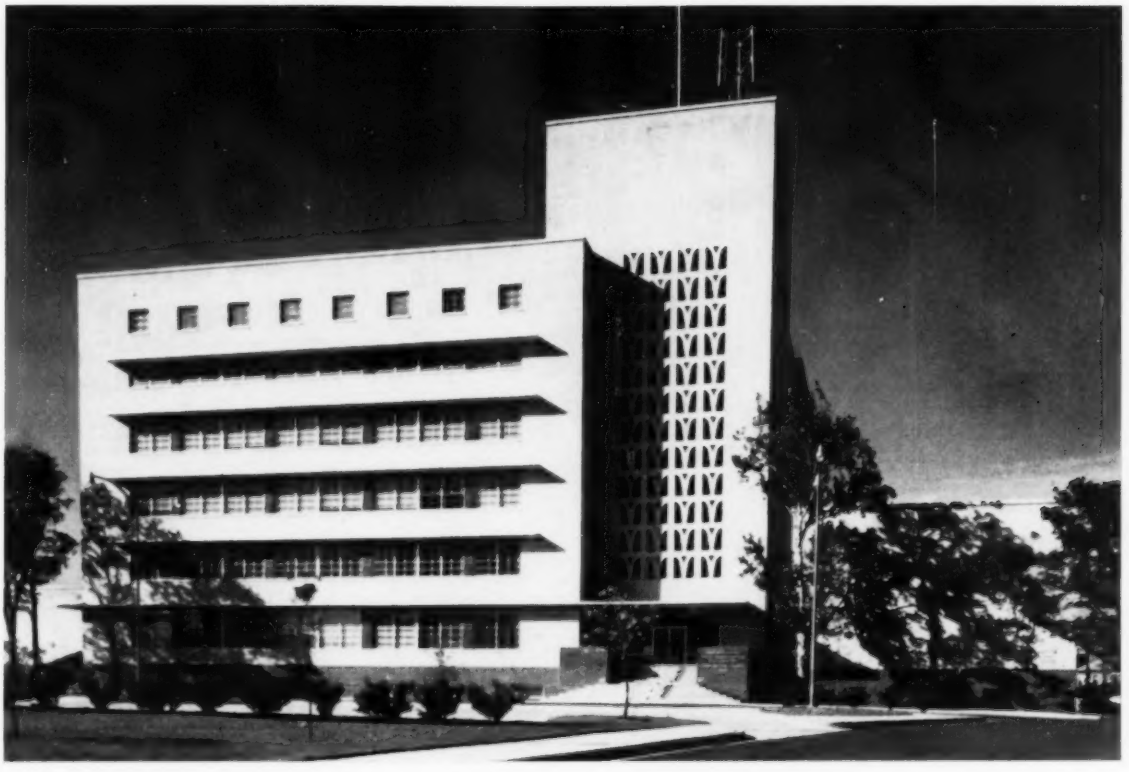
HOUSTON'S LAW ENFORCEMENT CENTER

Police Administration, Corporation Courts & Jail Building
Houston, Tex. *Kenneth Franzheim, Architect*

ON A 7½ ACRE PLOT FACING BUFFALO BAYOU, Houston has just completed a group of six buildings which will serve as a law enforcement center for the city. The main building (white in the plan above) houses the executive and administrative sections of the police department, three courtrooms, the city jail and a communications center for radio, telephone and television equipment. Ancillary buildings in the group contain the police training school and gymnasium, maintenance shops for mobile and radio equipment, storage garage.

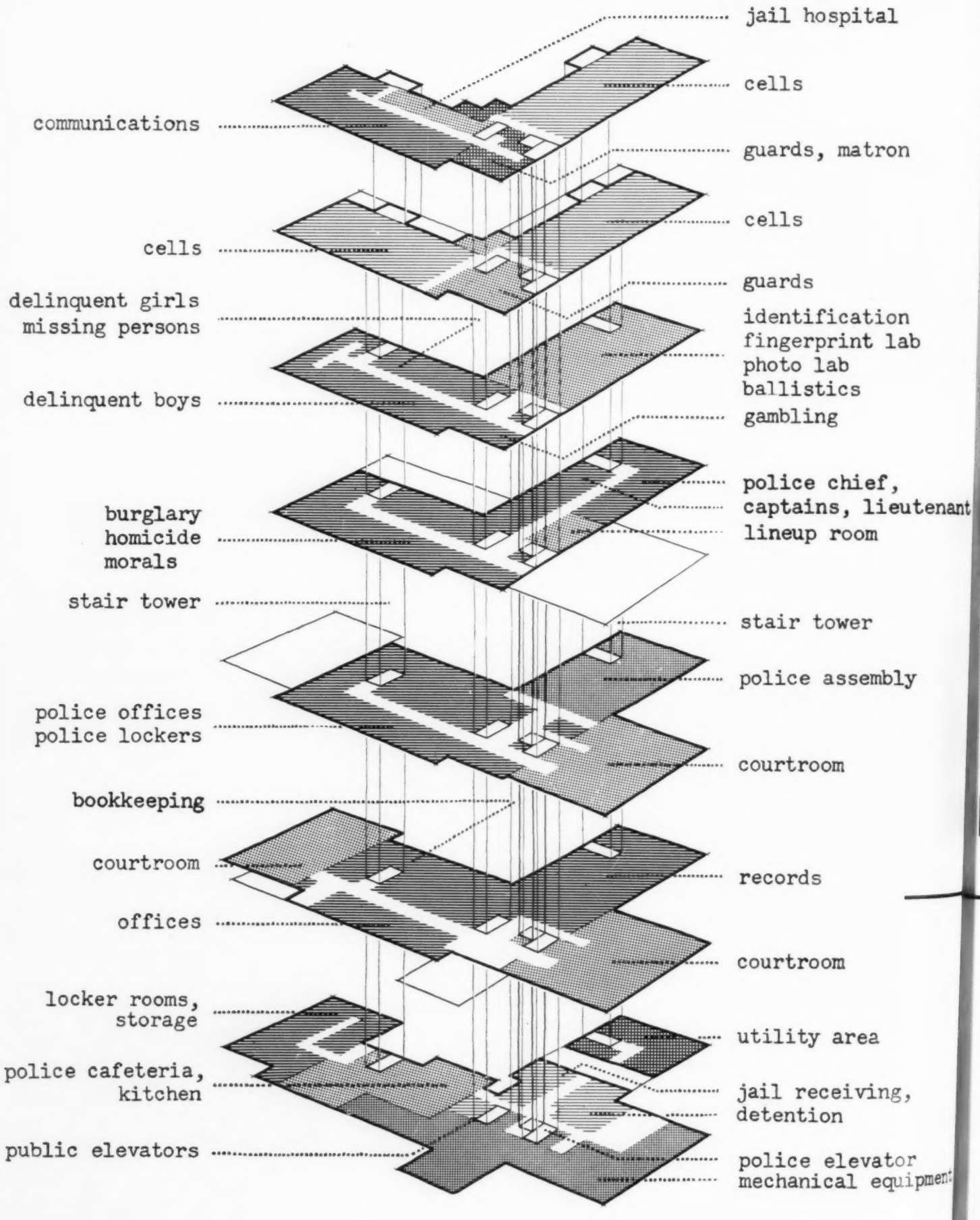
The street façade of the six-story principal building provides entrances for public, judges, lawyers and police, while the jail and prisoner entrance is located at the rear and reached by vehicle. These two segments of the building population are divided by separate stairs and elevators, brought together only as the workings of the law require. The jail function is divided into two main elements: reception and detention, which are at ground level — cell blocks on the fifth and sixth floors. This duality provides a means of isolating those arrested for minor illegalities from those with criminal tendencies or records. Only the latter reach the top floor cells, which are arranged to segregate prisoners into classes, especially as to age.

The exterior is of limestone and Texas granite. Windows, exterior doors and trim are aluminum.

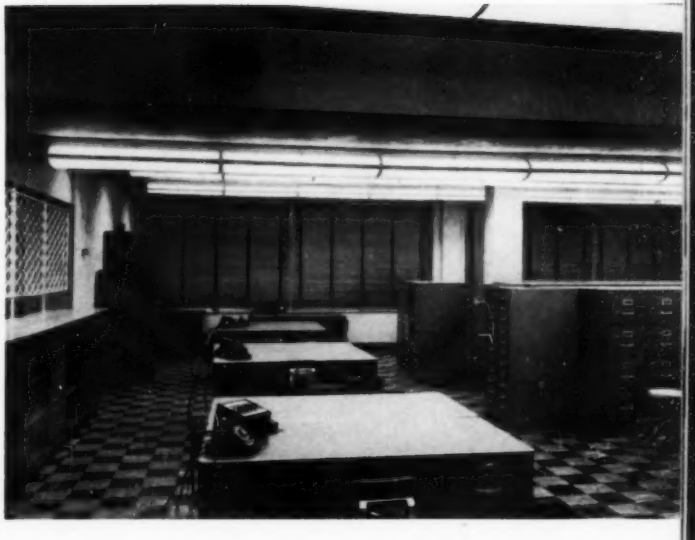


I. B. Lindenthal

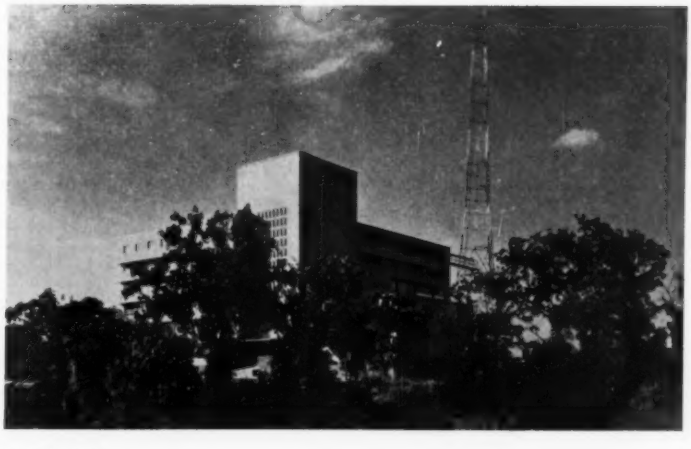
Public entrance is through street façade (above) into lobby (below) from which one gains access to court-rooms, offices and elevators. Prisoners are brought by vehicle to opposite side of building (left) — are detained at this level until case can be classified


jail hospital
cells
communications
guards, matron
cells
cells
guards
delinquent girls
missing persons
identification
fingerprint lab
photo lab
ballistics
delinquent boys
gambling
police chief,
captains, lieutenant
burglary
homicide
morals
lineup room
stair tower
stair tower
police assembly
police offices
police lockers
courtroom
bookkeeping
courtroom
records
offices
courtroom
locker rooms,
storage
utility area
police cafeteria,
kitchen
jail receiving,
detention
public elevators
police elevator
mechanical equipment

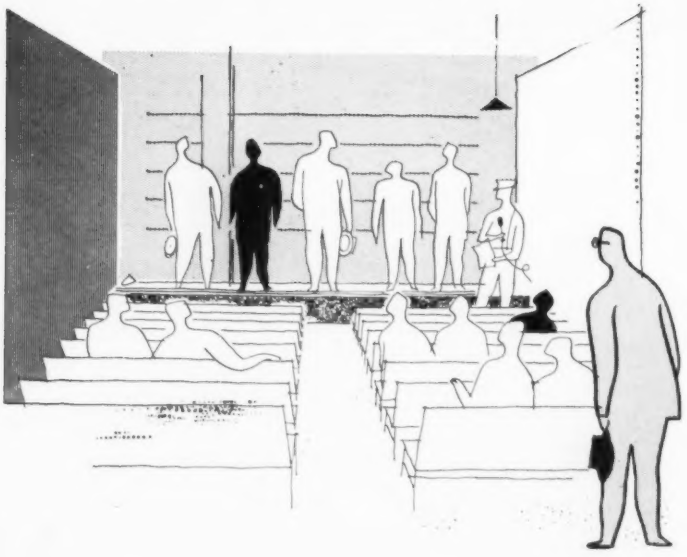
The three courtroom interiors (typical one shown at left) are treated in similar fashion. Police department offices (below, right and left) are air conditioned, pleasant, well lighted. Bottom photo shows 450 ft radio tower rising above building



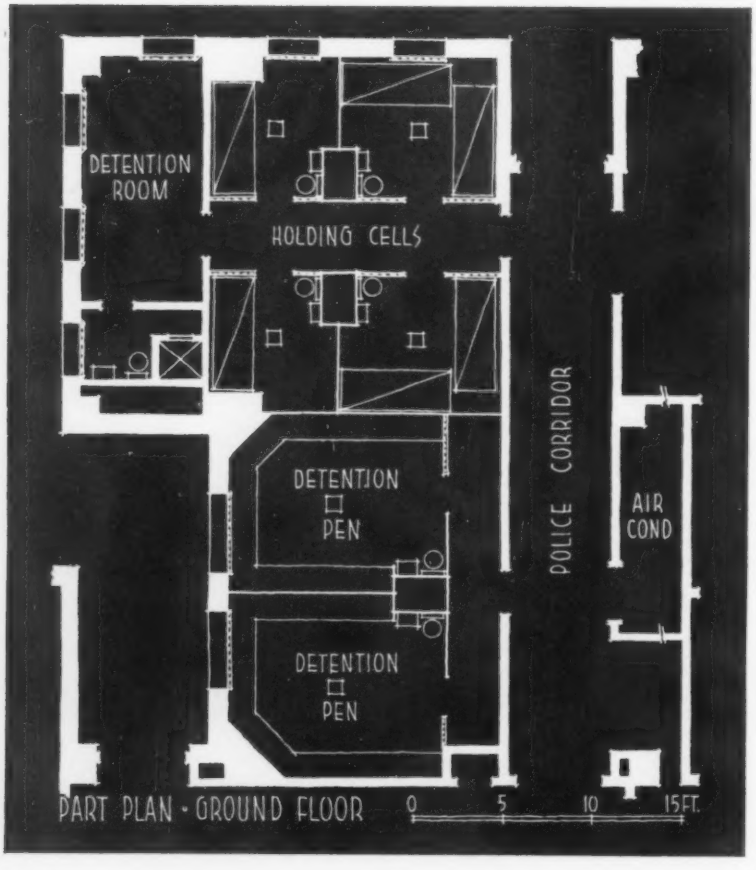
Perspective plans on opposite page show in diagrammatic form the seven floor levels that make up the building. Stairs and elevators are the vertical elements connecting the plans. Shown in their proper three dimensional relationship are the principal plan areas (courtrooms, cells, etc.) as well as the various departments within the police organization



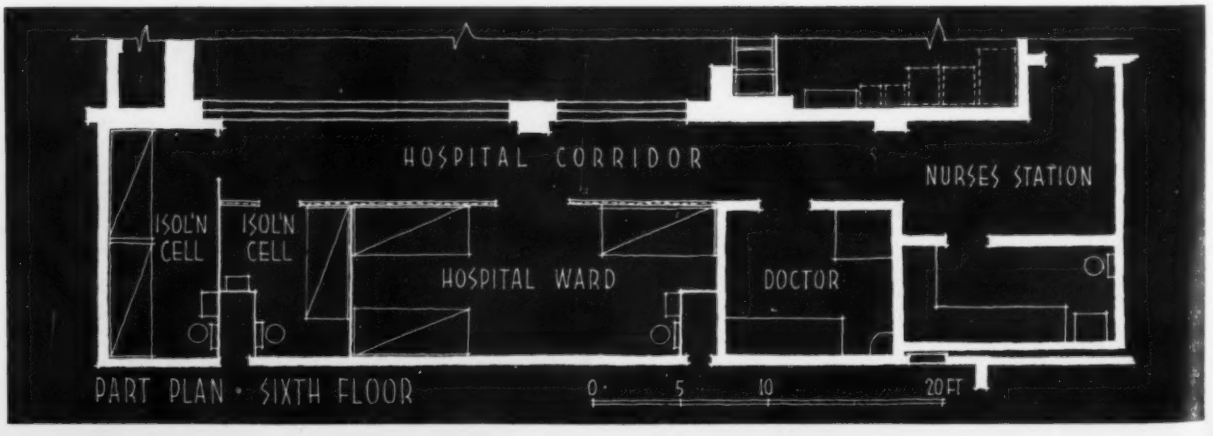
I. B. Lindenthal

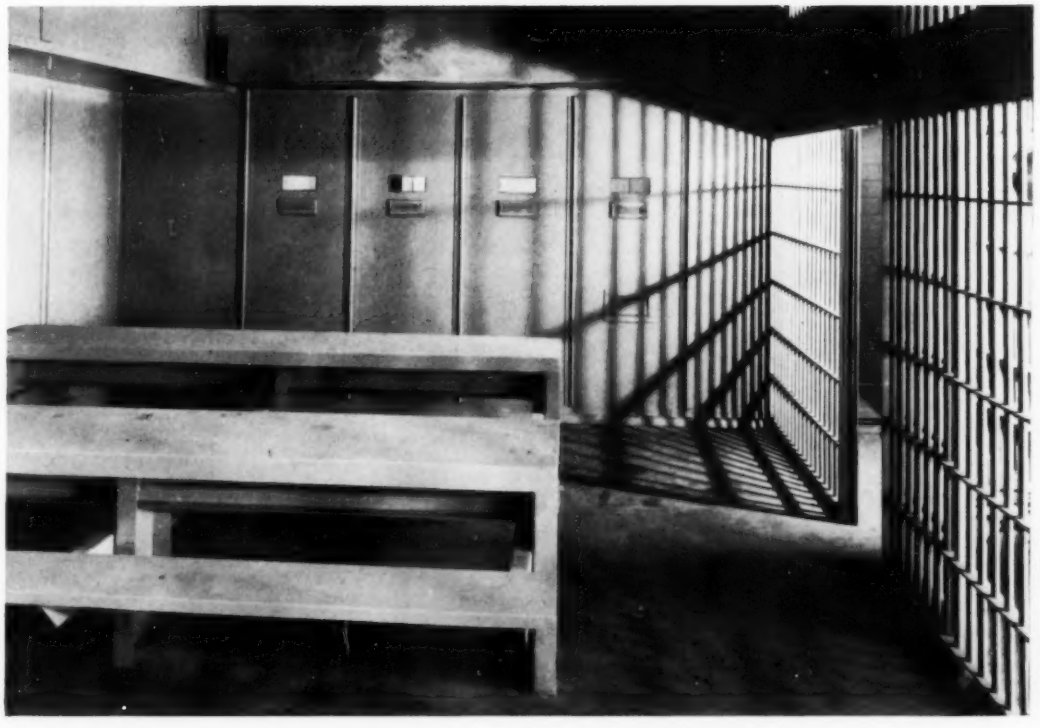


Drawing by Tom Ballenger

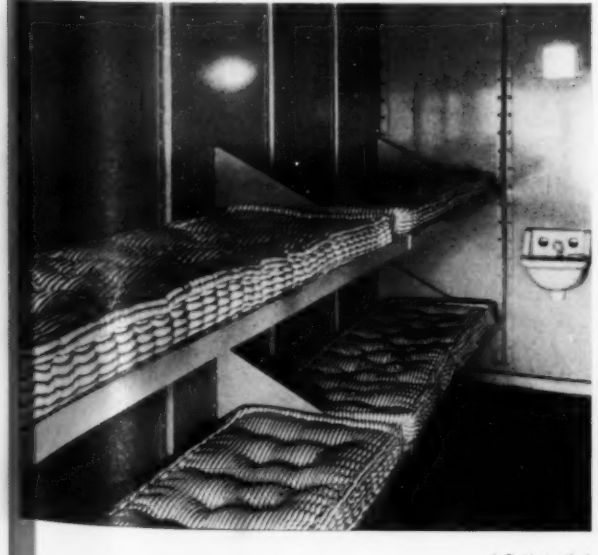


(Above) Police assembly room at second floor level — used for large gatherings of police and detectives for special briefings, etc. (Plan at left) Jail reception and detention area at ground floor level. Prisoners are held here to be screened and segregated into minor offender or criminal class. Only the latter are booked and put in a cell.
(Plan below) Jail hospital at sixth floor level has facilities for both emergency and routine treatment of prisoners





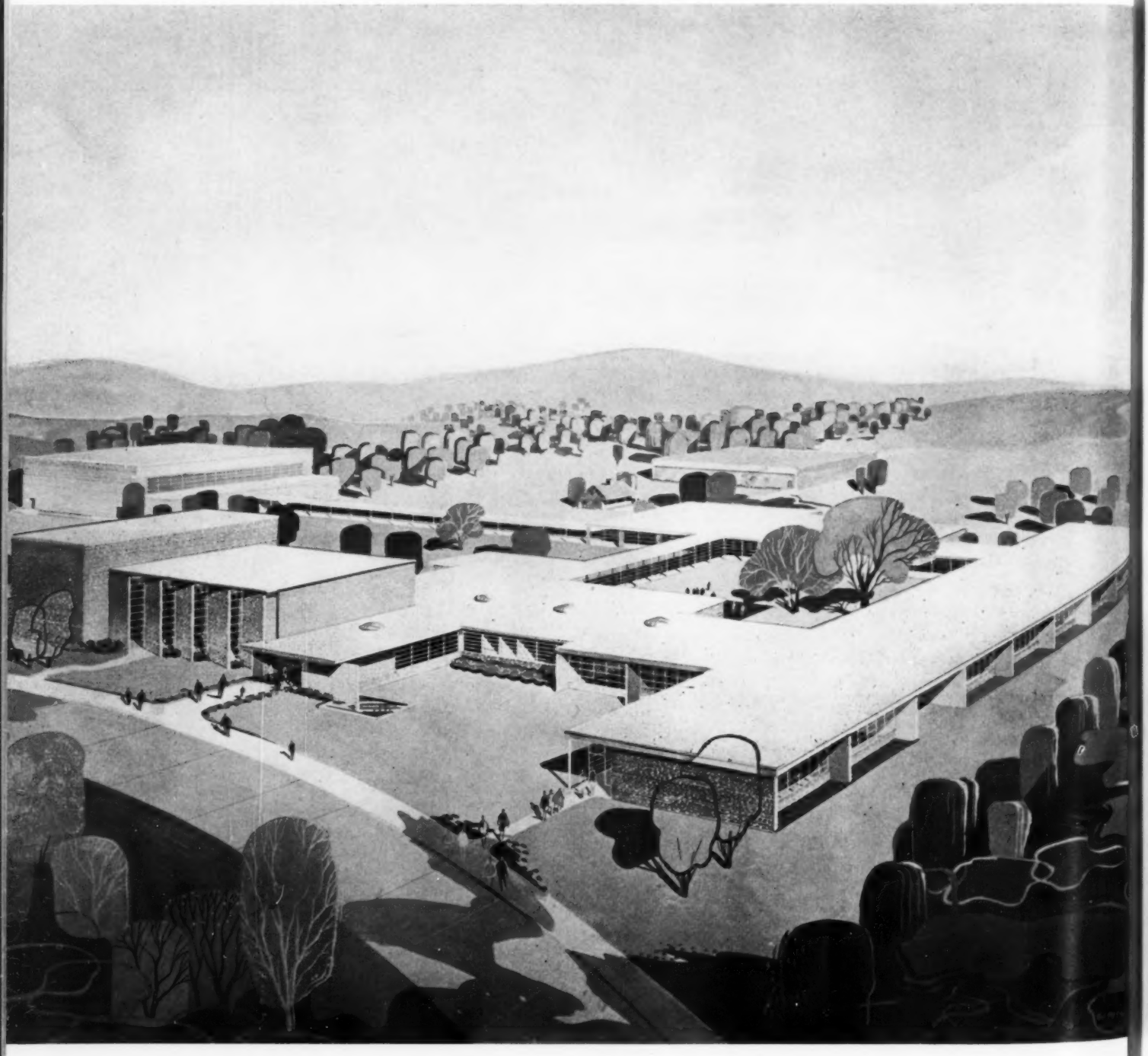
(Above) Cell block day room and dining area. Note wall apertures for seeing and talking to visitors. (Below, left) Typical cell contains bunks for four prisoners, lavatory and toilet. (Below, right) Prisoners' corridor is paralleled by guards' corridor, which separates cells from windows



I. B. Lindenthal

LANGLEY-BATH-CLEARWATER H

William G. Lyles, Bissett, C



Classroom unit, right foreground, forms one side of a court around which other units are grouped. Gymnasium (far left) and shop (center background) are isolated

HIGH SCHOOL, AIKEN COUNTY, S.C.

Carlisle & Wolff, Architects; Engelhardt, Engelhardt & Leggett, Consultants

SELDOM ARE THE COMPLEX RELATIONSHIPS involved in school design as well resolved as they are here. The consultants and architects cooperated enthusiastically; the consolidated junior-senior high school is closely geared not only to the communities' adult needs but, more important, to the actual nature of the three mill towns it serves; the plan is a clear demonstration of the "core" curriculum which is emerging in secondary schools; the amenities of a campus scheme (domestic scale, clear definition of purpose, integration with site) are obtained, yet the close-coupled building units are organized to facilitate circulation; and construction is so rationalized that costs are extraordinarily low for this quality of work. The contract was awarded in January 1952, at a price of $7.96 per sq ft.

It is a six-year high school — grades 7 through 12 — for 600 pupils, designed to provide a stimulating educational environment for pupils and to serve the community for meetings, recreation and social betterment. The variety of activities likely to take place in a school of this kind is hard to forecast, but the intent is to stir up and respond to real community needs. For instance, adults might experiment, in the home economics unit, with cloth from local mills for dressmaking and home decoration; or food habits might be studied through school gardens, diet and cooking courses or community canning projects.

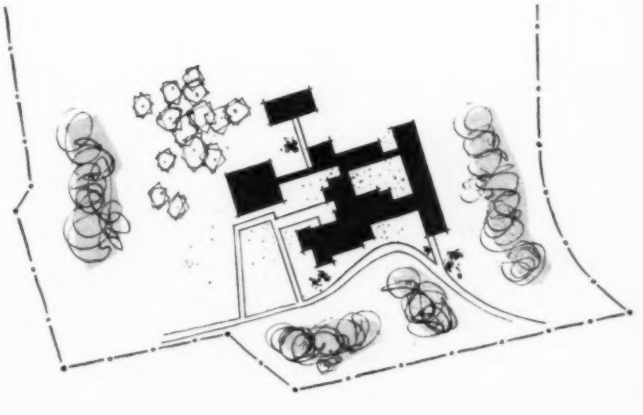
In addition to present needs, the AEC H-bomb plant is in the county and, although the effect of increased population on this school is unpredictable, all of the 55-acre site was laid out as to eventual usage and the school plant was designed to be expansible to double its capacity.

Regarding curriculum: the school houses both junior and senior high school grades. The number of pupils in each may vary widely, and to duplicate specialized facilities would have been too costly, so the two are housed jointly. In the junior high program, one teacher has a class for the two or three "core" subjects (language, social studies, math, etc.); this provides a transition from elementary school experience to the more departmentalized senior high school program.

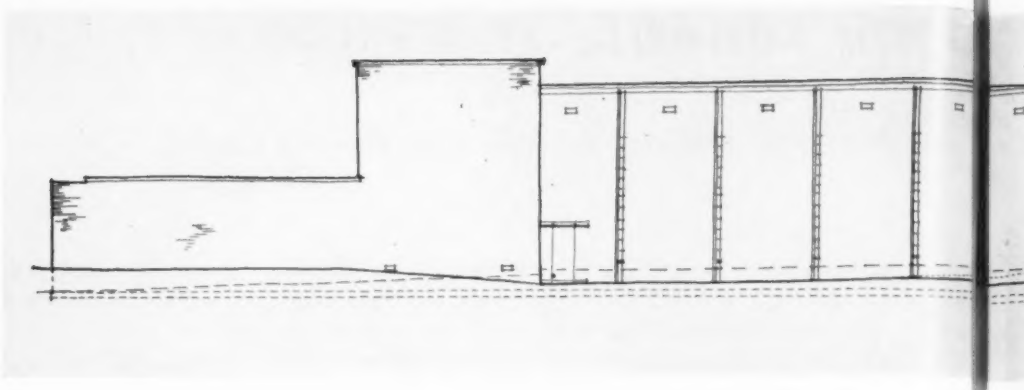
Laying out the units around a central court made it possible to use the court as an adjunct to both the cafeteria and the library; yet surrounding school rooms are not affected by any noise this might cause since there is a corridor between to act as a buffer. Also, the rooms face outward to the pleasant countryside. Trees supplement wide eaves in keeping direct sunlight out of the rooms. Location of shop, gymnasium, auditorium and service areas, adjacent to the auditorium unit, was predicated on easy accessibility for adults and students, on segregation of noisy areas and on minimum extent of paved roadways.

Rooms are mostly 30 by 30 ft (except that home economics rooms are larger) for maximum flexibility. Partitions between them are load-bearing slag block, painted and extending beyond exterior walls. The standardized bays thus achieved are spanned by open web joists about 6 ft on centers; ceilings are combination acoustical and insulation board which serves as a form for the poured gypsum roof. Exterior window-walls run to the ceiling between joists and are made up of projected steel sash and mullions. Exterior corridor walls of glass are occasionally interrupted by sections of masonry to receive doors and to accommodate bulletin boards and tack strips. Walls between classrooms and corridors are prefabricated, of specially designed cabinets 3 ft high, with wood double-hung sash above.

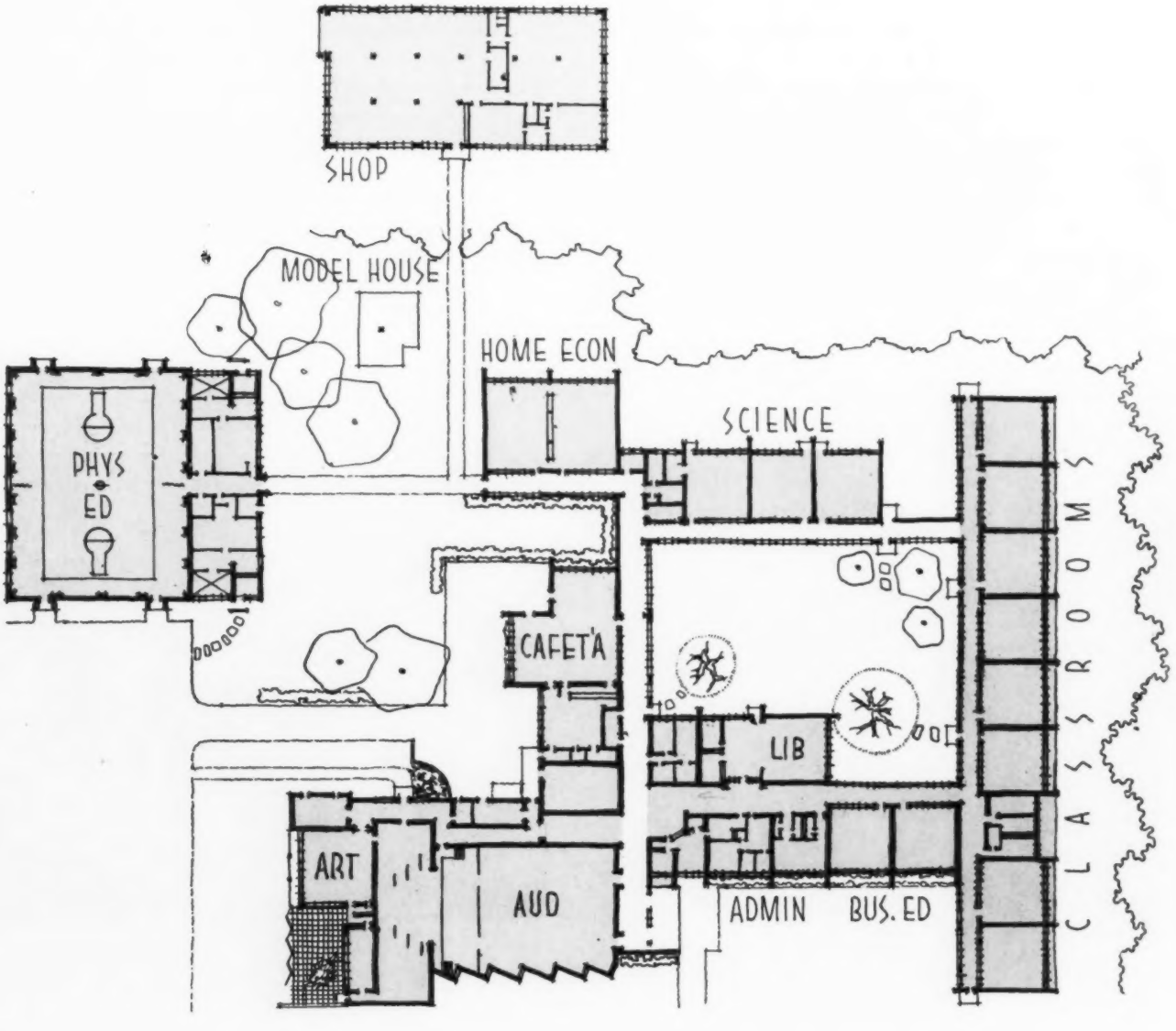
Portion of the 55-acre site; entire area was studied and usages were defined for future expansion. The school won an award of merit at the American Association of School Administrators' Boston exhibition last spring

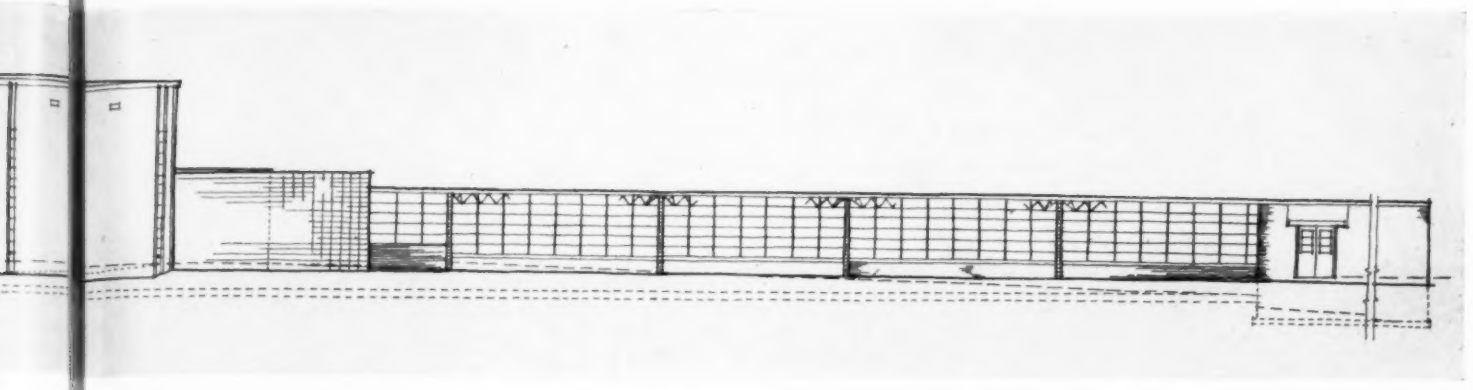


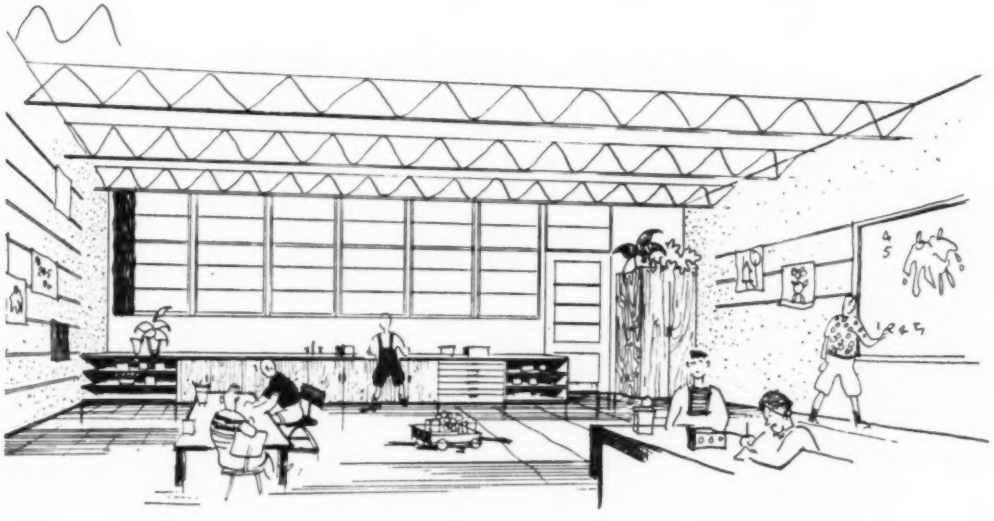
AIKEN COUNTY
HIGH SCHOOL

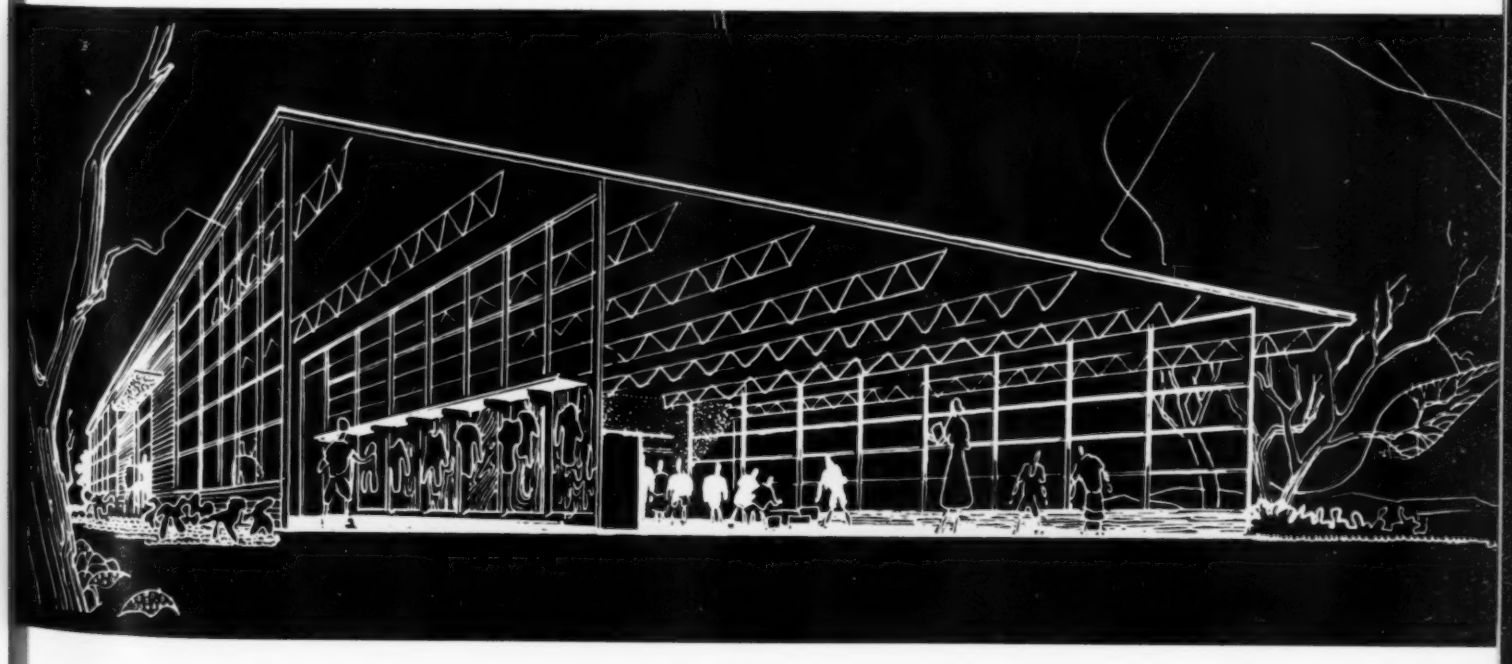


In plan, facilities are clearly organized; circulation between classroom unit and specialized departments or laboratories is simple and direct; noisy shop, gymnasium and auditorium are separated from quiet areas









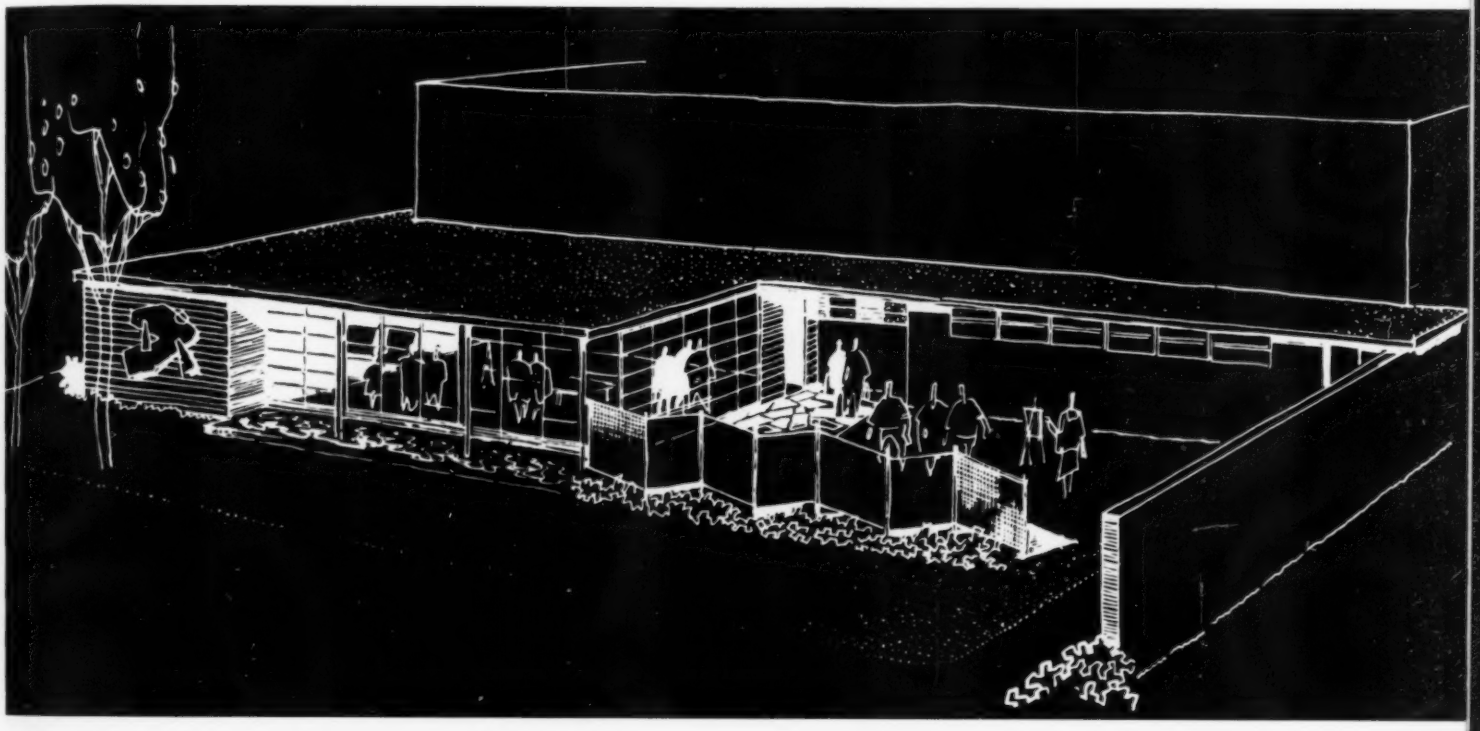
Perspective section through classroom wing, corridor at left

AIKEN COUNTY HIGH SCHOOL

There are two general science laboratories and one combination chemistry-physics-biology laboratory with adequate science material storage

Library seats 75, has workroom for library and visual aids, a conference alcove for student use and connects directly to shaded outdoor area

Art classroom, at one end of auditorium unit, has its own outdoor area for working, exhibitions, etc. This also has ample storage space



Cafeteria serves also as student social center, for group meetings, etc. Connected to outdoors, it is L-shaped rather than a barn-like large space

Hedrich-Blessing

CENTURY ELECTRIC COMPANY, ST. LOUIS

Wm. B. Ittner, Inc., Architects & Engineers

THIS manufacturing plant faces the old Union Station across Aloe Memorial Plaza on St. Louis' Market Street. Focal point of the plaza is Carl Milles' fountain with its graceful figures and soft play of water. The juxtaposing of fountain and industrial plant sets up an interesting contrast between the lithe forms of the sculpture and the disciplined lines of the building.

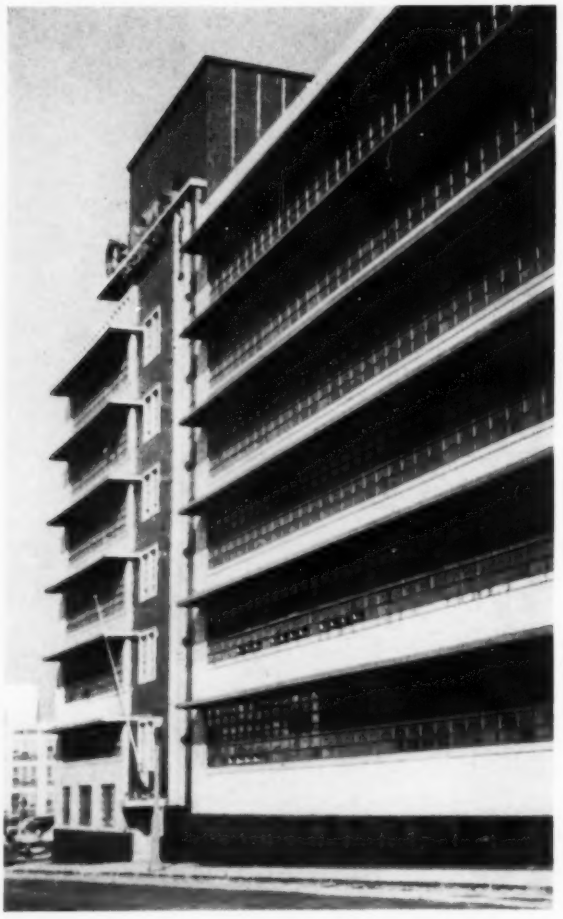
The factory as we now see it was built in two stages: first a one-story plant designed to support seven more floors — three years later the present structure built about and above the original one. The lot was formerly a pond and presented problems in the design of the footings.

The program called for a large clear factory area for light manufacturing served by passenger and freight elevators. Such a plant is suitable for multi-story construction in a downtown area since it presents no health hazards or public nuisance. The top five floors are at a common level throughout, but due to the loading dock and freight handling facilities on the side street, there is a stagger in level here which results in a building seven stories on the plaza and eight stories on the side street. Atop the roof is a large, glass enclosed all-purpose room suitable for worker-management meetings, film projection and recreation. This room opens to a terrace affording a pleasant view of the city.

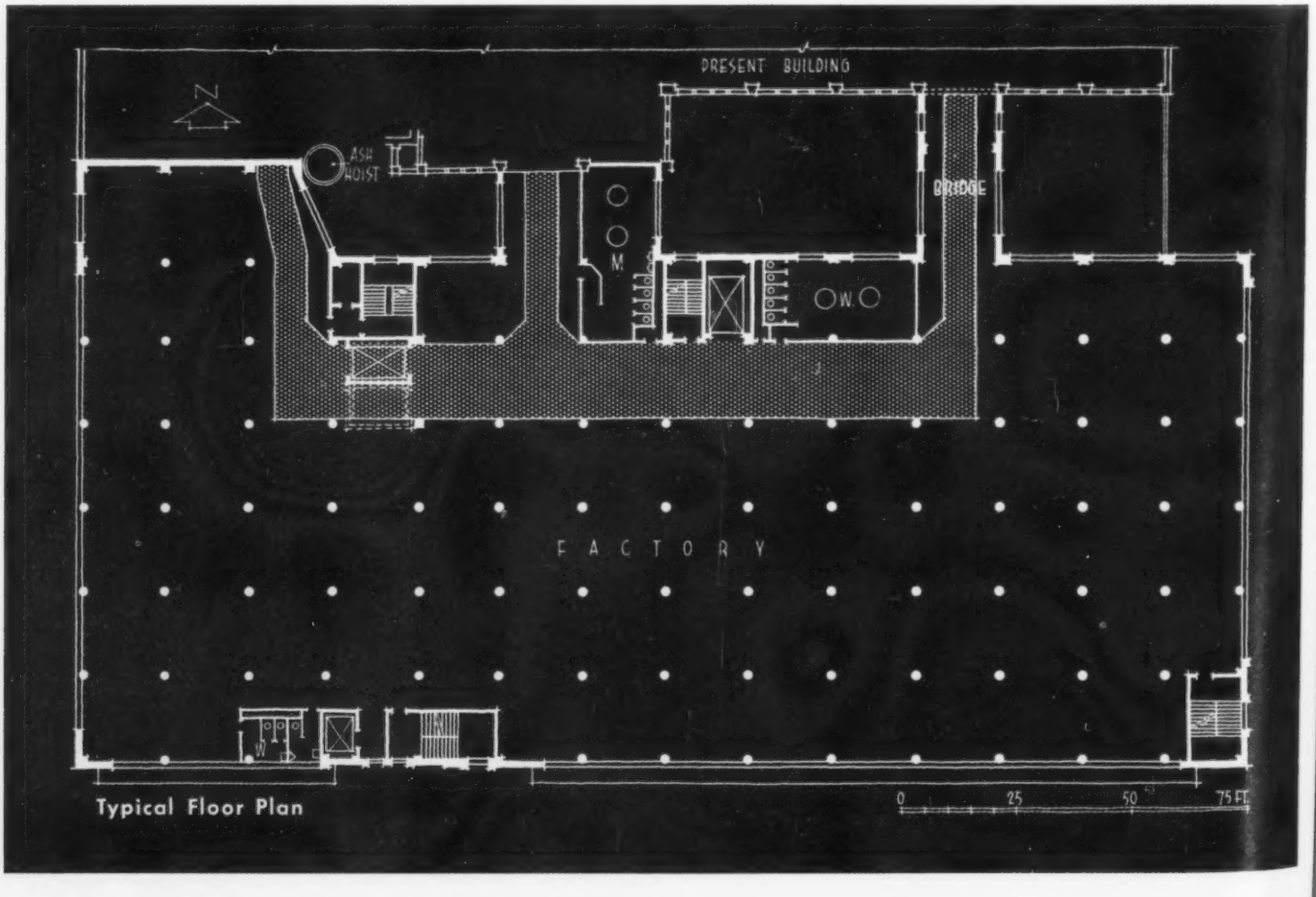
Structure is a reinforced concrete frame with concrete rib tile floor construction. The exterior is faced with terra cotta in dark green and cream color. Exterior trim is satin finish aluminum throughout.

Horizontal sunshades on west façade (right) are 3 ft 6 in. concrete extensions of the floor slabs. Top surface is lead covered — bottom is concrete in coffered form. Vertical strip of glass block lights the main stair of the building.

Plan of typical floor (below) shows open area for light manufacturing. Shading indicates circulation and connection with existing building adjacent, owned by the same company



Lester C. Haeckel



Typical Floor Plan

LOUISIANA WEEKEND HOUSE

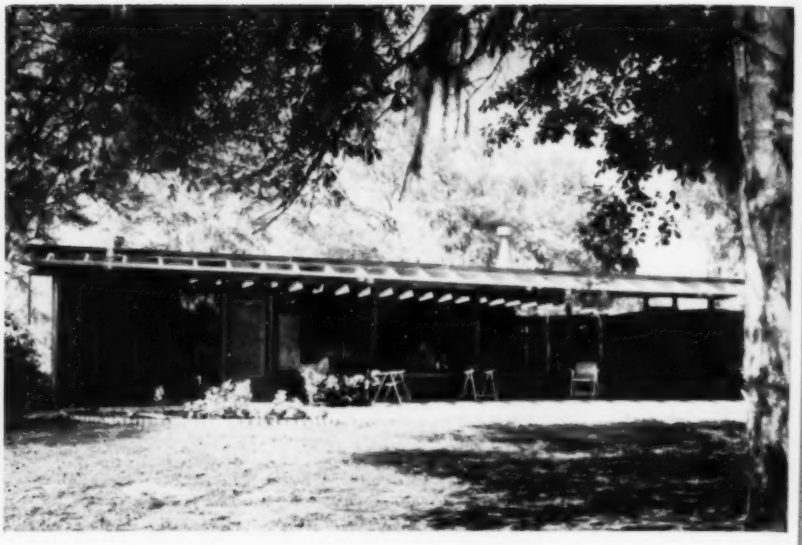
Dr. and Mrs. Morris Shushan, Owners; Curtis & Davis, Architects

THE EXTREMELY ATMOSPHERIC SITE chosen for this weekend house in a northern suburb of New Orleans was a big factor in its final design. Careful orientation and a low roof pitch made it possible to preserve the entire existing grove of beautiful old oaks. In keeping with its natural site, the house is constructed of wood frame, with the structure exposed where possible. Natural textures were used for all finishes.

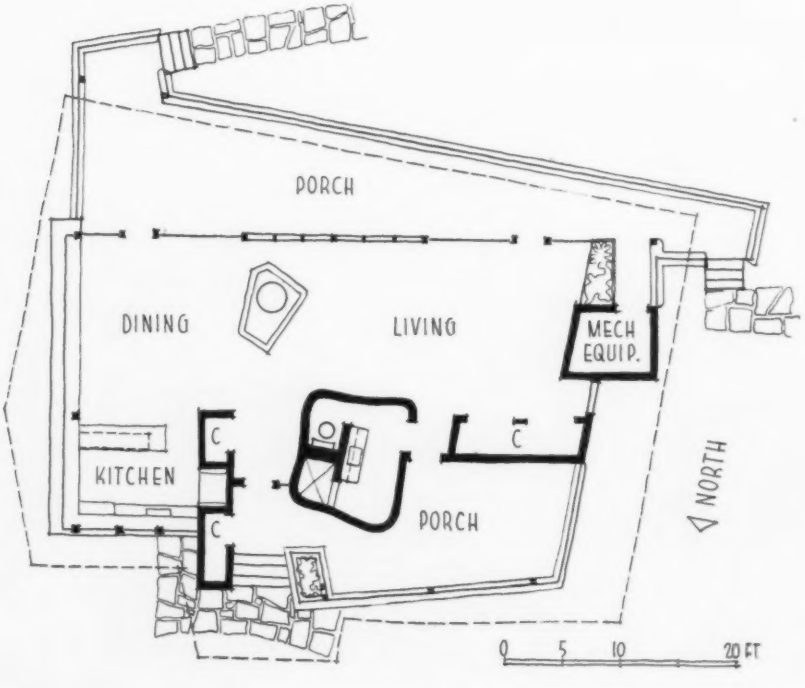
Joseph W. Molitor

Elemore Morgan

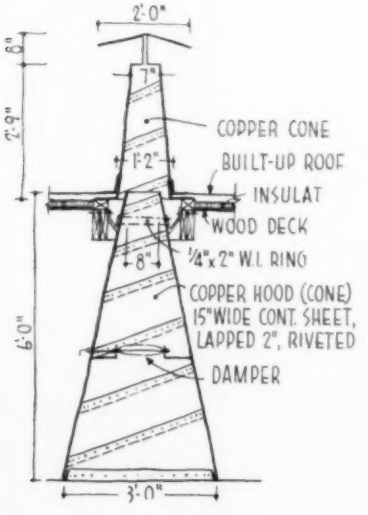
Joseph W. Molitor

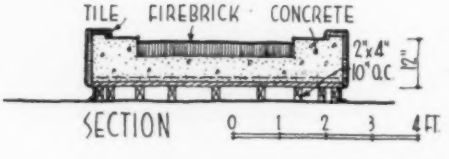


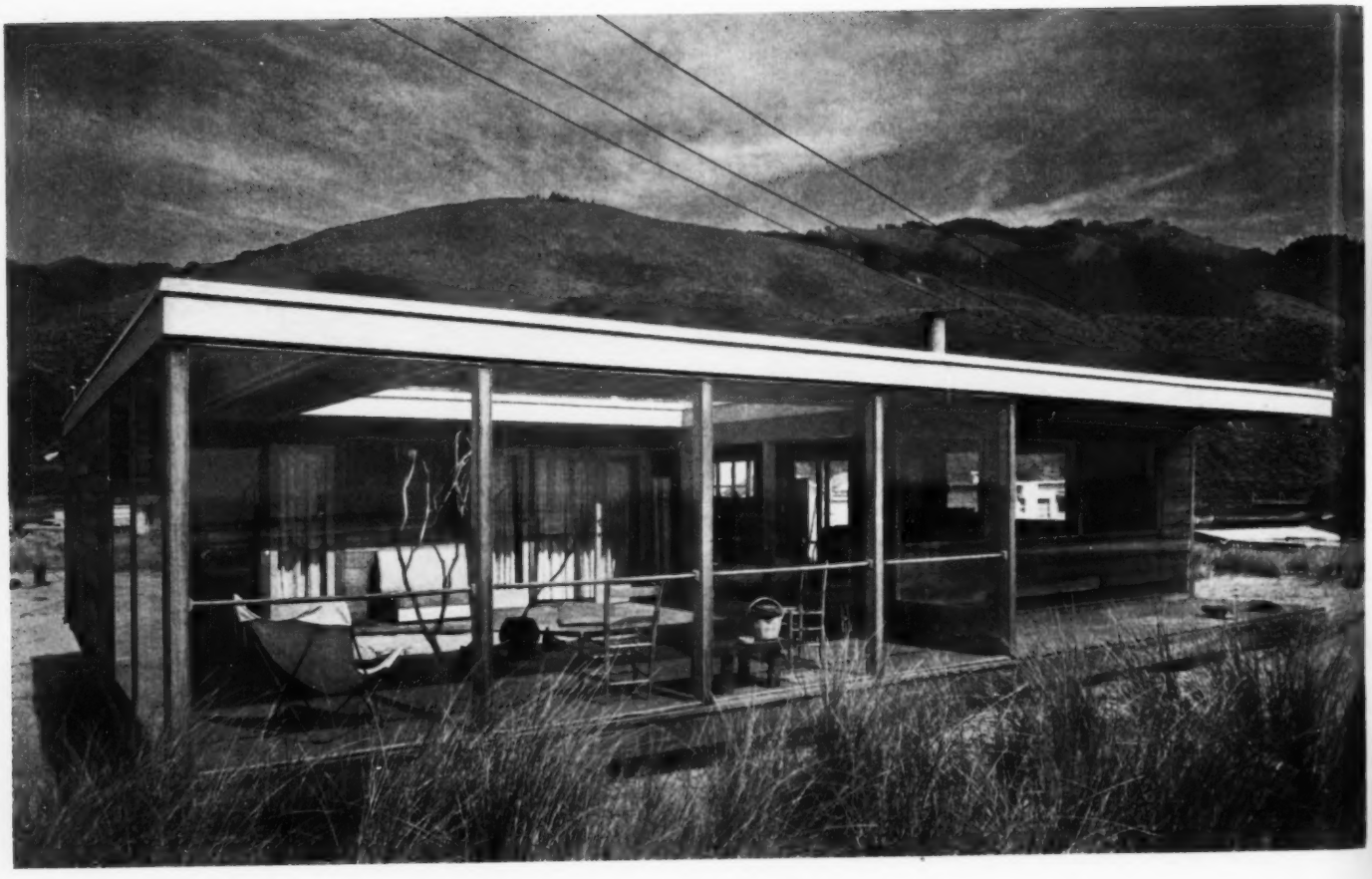
The openness of the plan and structure of the house is the result of the owner's request for as much spaciousness as possible in a limited area. The basic program called for one large room with a flexible arrangement and necessary facilities for entertaining. Although intended only for weekend use at present, the plan makes provision for the future addition of a bedroom by enclosing the covered terrace adjoining the bath. A mechanical room and insulated ducts are provided for future installation of air conditioning. Materials used include polished pecky cypress walls, flagstone floors, pine ceiling and glazed tile hearth.

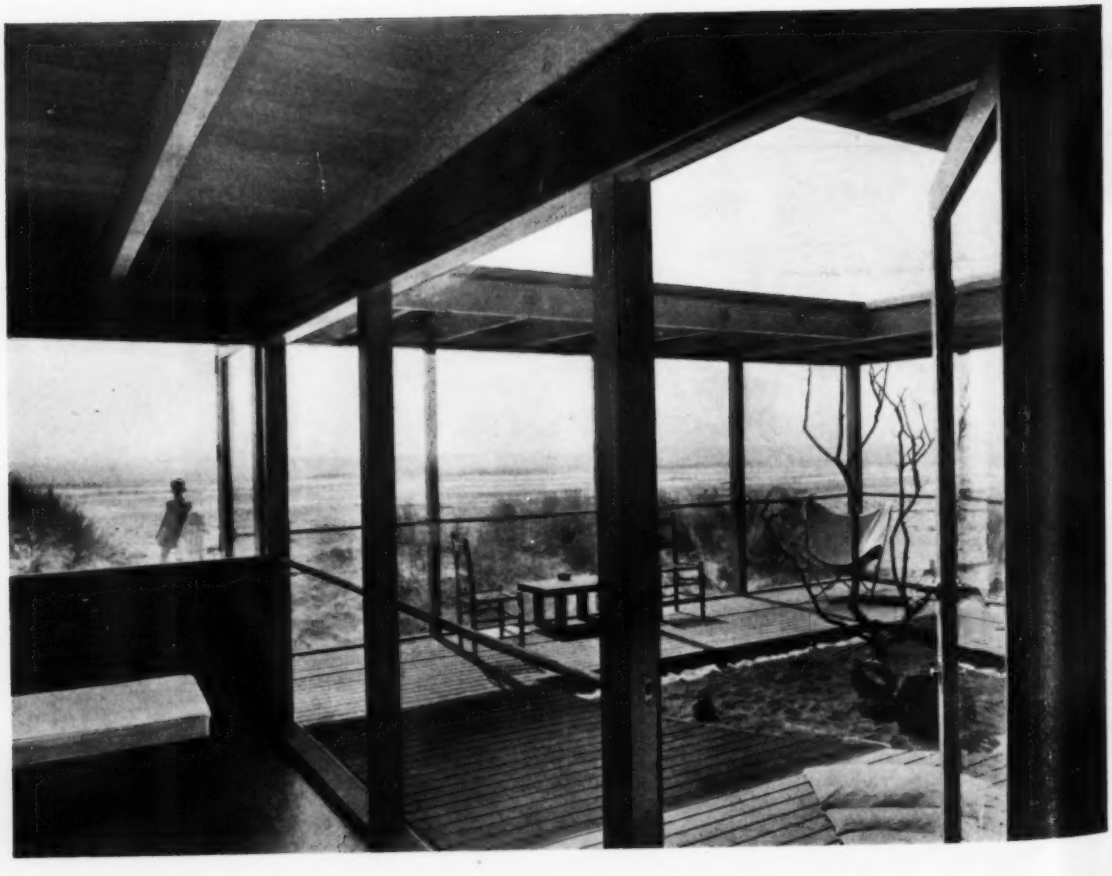


Fixed glazing in all rooms, except storage closets and bath, permits good views of oak grove, enlarges apparent area of house. Roof overhangs and trees shade glass; louvers on doors and below big windows give ventilation. The specially designed fireplace, shown in photo, left, and detail, below, has cone-shaped copper hood, raised hearth









Roger Sturtevant

CALIFORNIA BEACH HOUSE

Stinson Beach, Marin County, Calif.

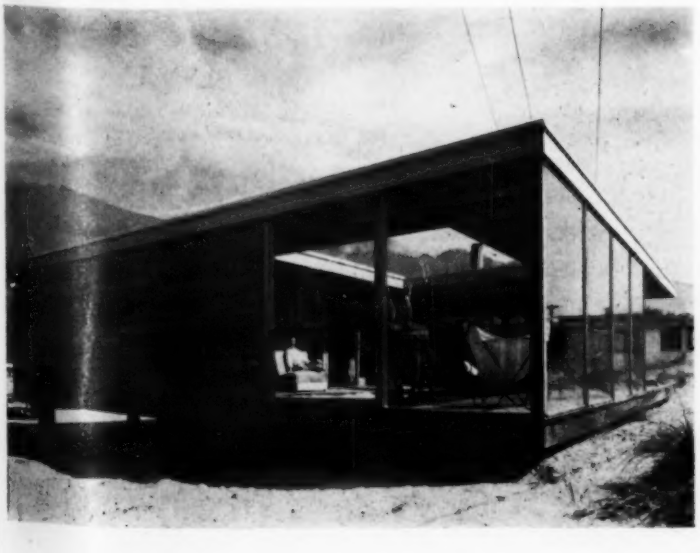
Mrs. Harry A. Yeazell, Owner

Francis Joseph McCarthy, Architect

THIS simple, compact little house was designed for a grandmother who plans to rent it in the summer months to "inland vacationers". During the rest of the year, it will be used for weekend and winter vacations for herself, her children and grandchildren. The plan is basically one large all-purpose room, with two small bedrooms. Two daybeds in the living area double for sleeping. The glassed-in deck provides a sheltered place for sunbathing and for supervised play of the children. A small deck was provided outside the kitchen for outdoor meals.

The house is set on piles and girders several feet above the natural line of the sand dunes to avoid having to control the movement of the sand. Redwood was used for both interior and exterior walls, exposed ceiling beams and roof sheathing. The roof is tar and gravel. All interior floors are linoleum.

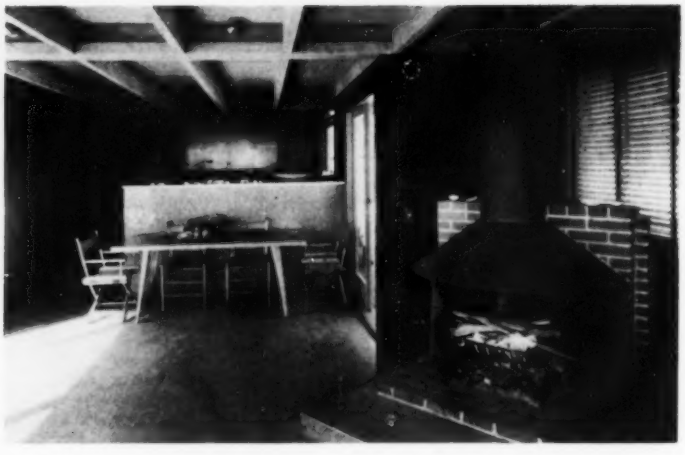
The partly open roof over the deck provides both sunny and shady areas for outdoor living. In winter, heat is provided by fireplace, portable electric heaters



• PLAN •

SCALE 0 1 2 10 15

Roger Sturtevant



The plan and fenestration of the house were designed to give a sense of openness and good views across the dune grass to the sea, yet at the same time provide protection from winds and ocean glare

COUNTRY HOUSE ON LONG ISLAND

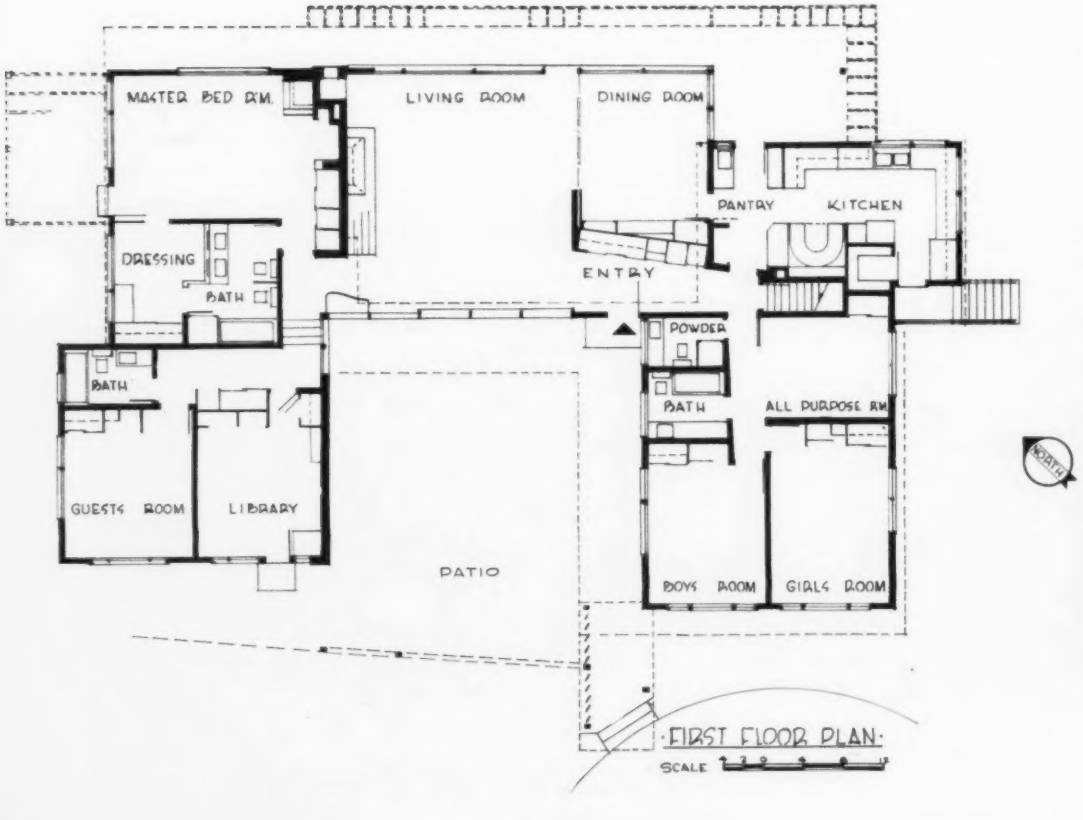
Residence for K. L. Rawson

Serge P. Petroff and Harvey P. Clarkson, Architects

THIS neatly designed country house, although intended for a somewhat more formal way of life than the two preceding houses as well as for year-round occupancy, still reflects much of the same spirit in its use of natural materials and open planning in its major living areas. Principal rooms are oriented to face the view afforded by the hilltop site and have exterior walls made mostly of glass. The front entrance of the house is on the opposite side of the building and passes through a cloister-like patio formed by the guest room-library wing and the children's wing. This separation of sleeping quarters affords a great amount of privacy to each of the occupants. The patio itself may be opened out to the front lawn by raising a series of venetian blind panels in the enclosing wall. The house has natural-finished vertical siding, white trim.

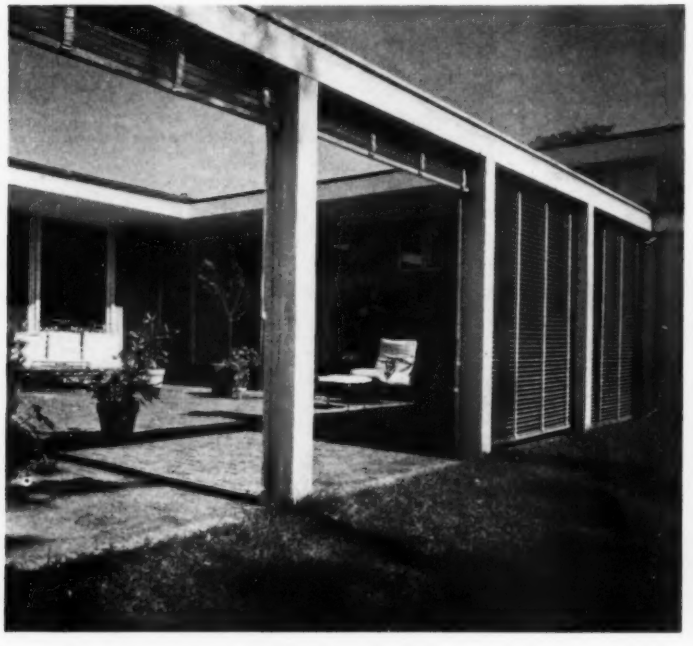
Joseph W. Molitor

The U-shaped plan (below) has centralized living and service areas, flanked by three sleeping wings. Actual living space is extended by a sheltered terrace and a patio

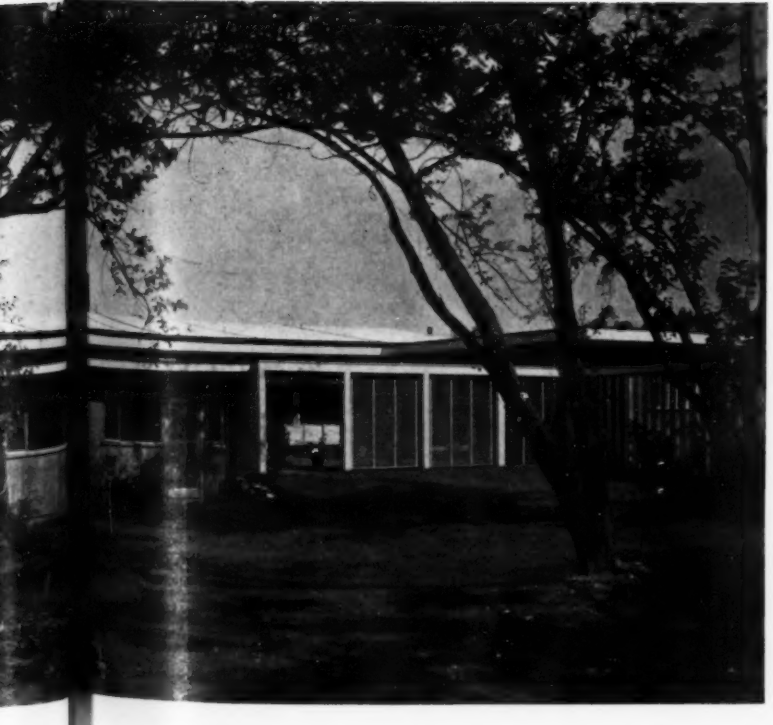


Joseph W. Molitor

Photos at far left and below, center show the northeast façade, with its covered terrace off the glass-walled living rooms. The kitchen also opens directly on the terrace to simplify service for outdoor dining

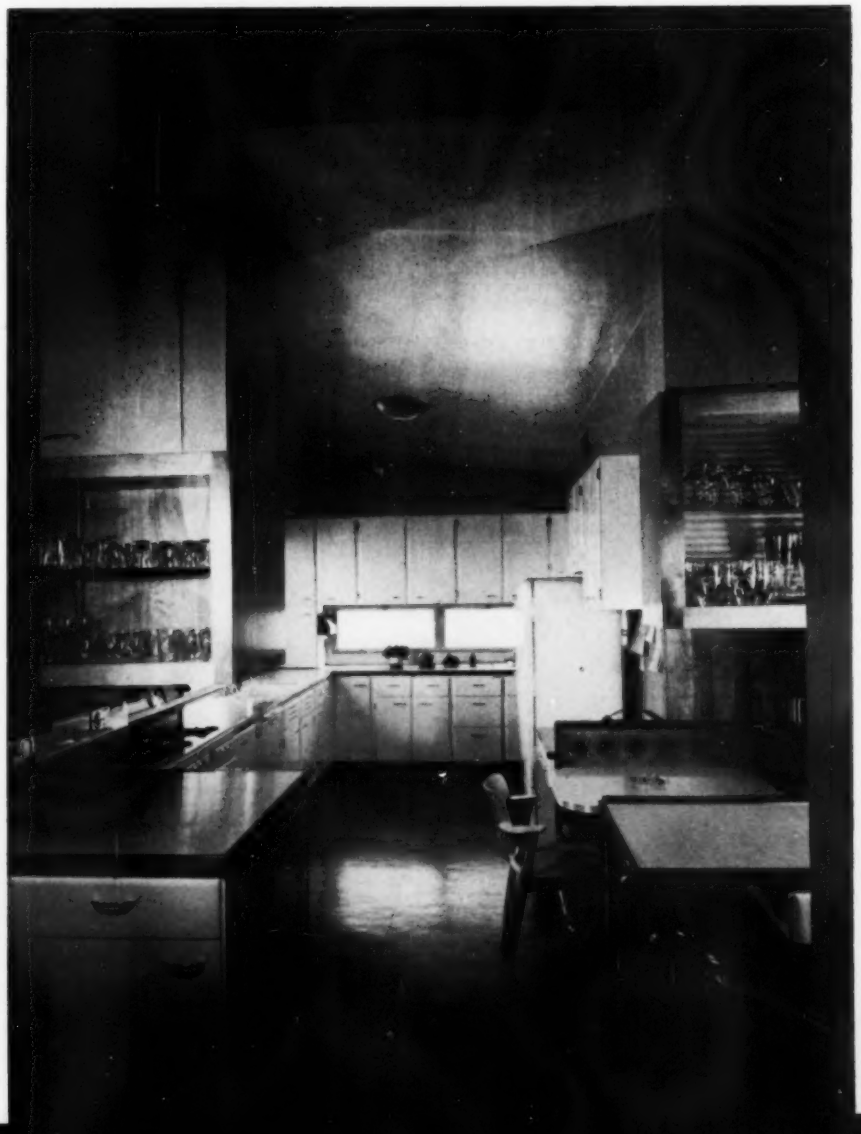


Privacy is gained for patio at front of house by venetian blinds hung on wood frame (above and below, left). Front entrance is shown directly below

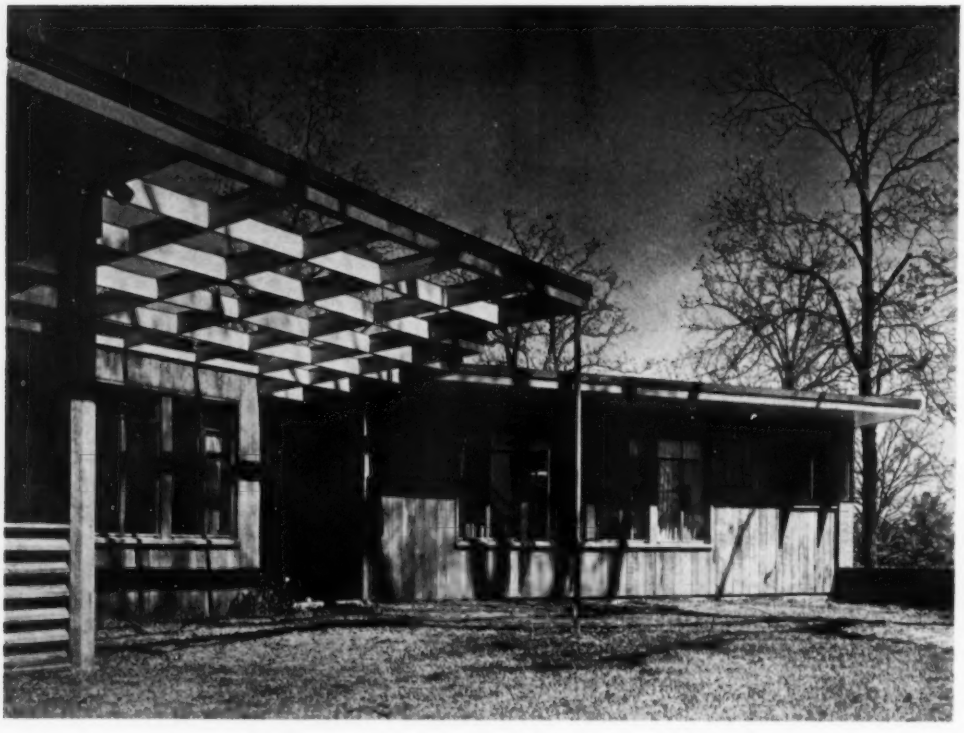


Joseph W. Molitor

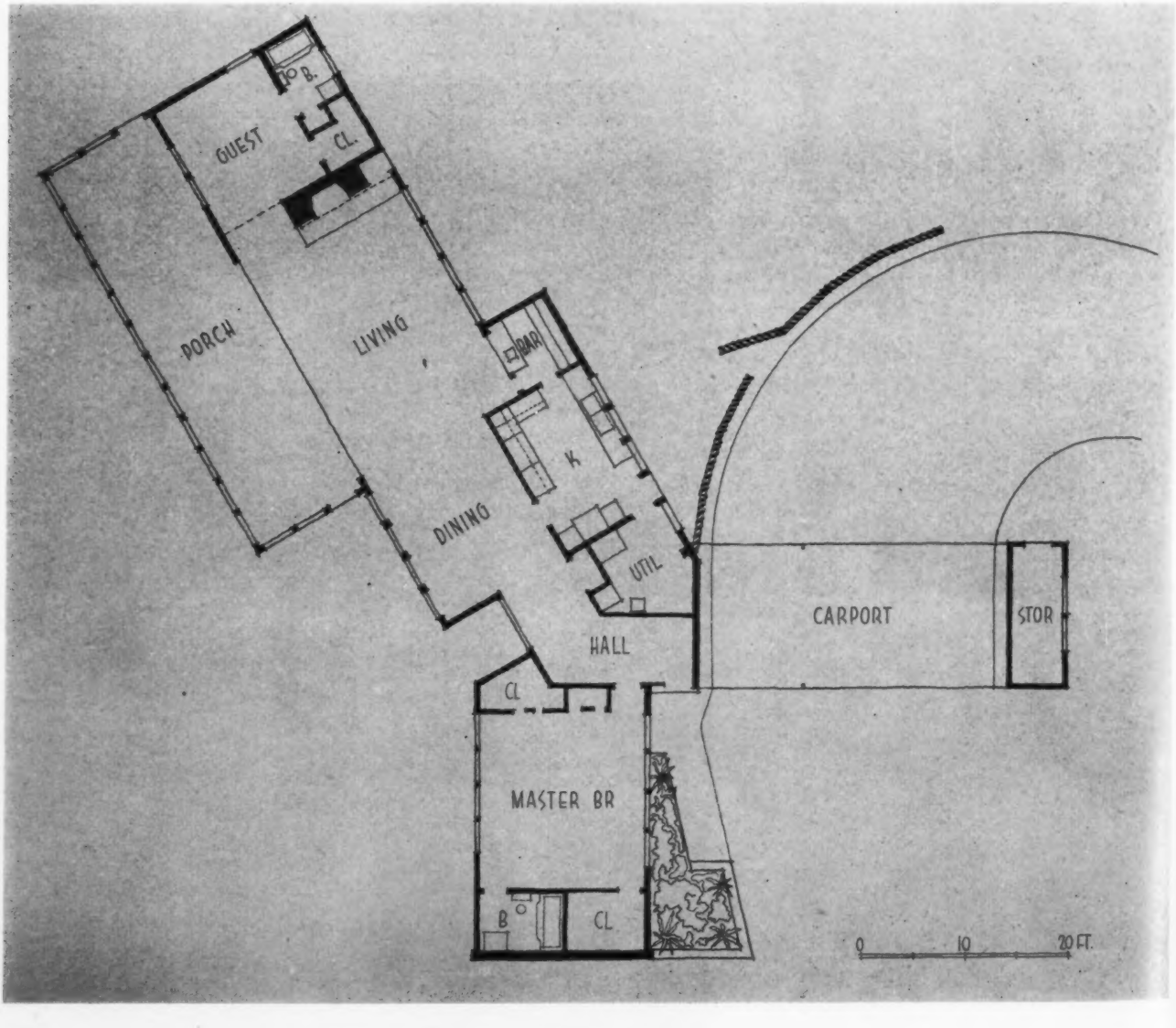
The large living room (above) opens on both the terrace and the patio, is separated from dining area by folding partition. Study, guest room and master bedroom (below) open off corridor by fireplace wall

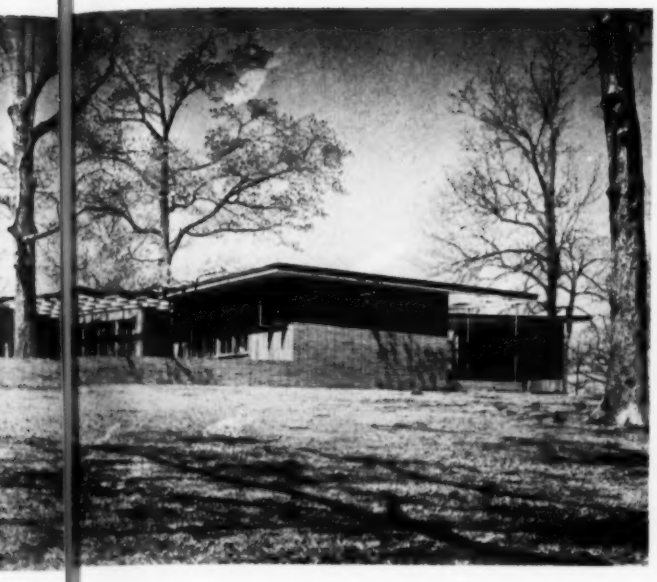


Well-equipped kitchen (right) opens directly to dining room and dining terrace, both of which are visible in the photo above



Joseph W. Molitor





The house is oriented to eliminate glare of hot summer sun, has large screen porch on southeast

MISSISSIPPI HOUSE DESIGNED FOR HOSPITALITY

Mr. and Mrs. George Harrison, Owners
James T. Canizaro, Architect

SASSAFRAS SIDING, painted tidewater cypress trim, and a large screen porch combine to give a strong regional flavor to this Jackson, Miss. house. The natural finish siding is complemented by the use of a variety of colors for the trim: window trim is gray-green; open-square overhangs are a lighter green; overhang soffits are pale yellow; the roof is gray slag; and all the steel lally columns are a Chinese vermillion. The windowless street façade and all garden walls are dark red roman brick, with recessed horizontal joints.

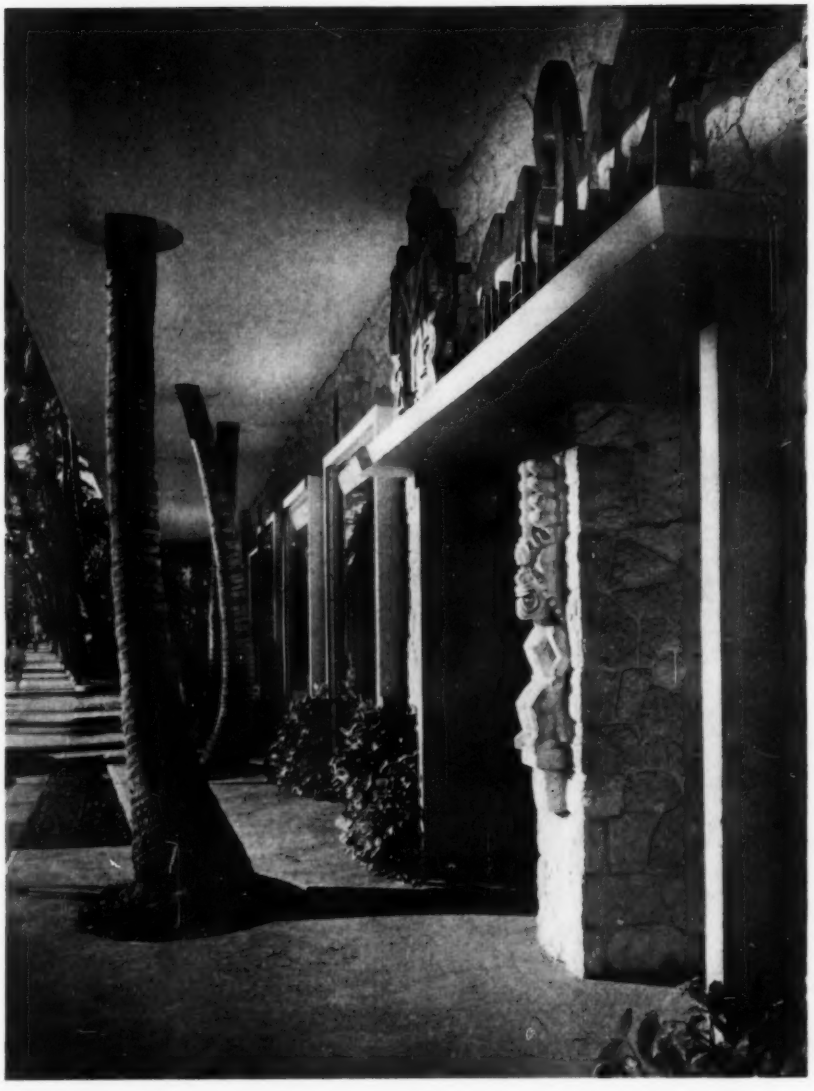
The plan of the house was arranged so that the living room, dining area, guest room and porch could be opened into a single area for entertaining. The bedroom-sitting room is separated from these rooms by the entrance hall. The entrance drive and carport were arranged to allow ample parking space for guests' cars.

Below, left: entrance drive, carport. Screen porch (below, right) has overhang, louvers to keep out rain

Interior walls of living room (above, left and below) and of entrance hall (above, right) are of natural finish ash. Ceilings are plaster, painted dark brown. Living room floors are wood covered with light green carpet; floors in the entry and on the screen porch are finished with quarry tile. The guest room can be separated from the living areas by a draw curtain

Joseph W. Molitor

R. Wenkam



WAIKIKI BEACH SHOPS

Waikiki, Honolulu, Hawaii

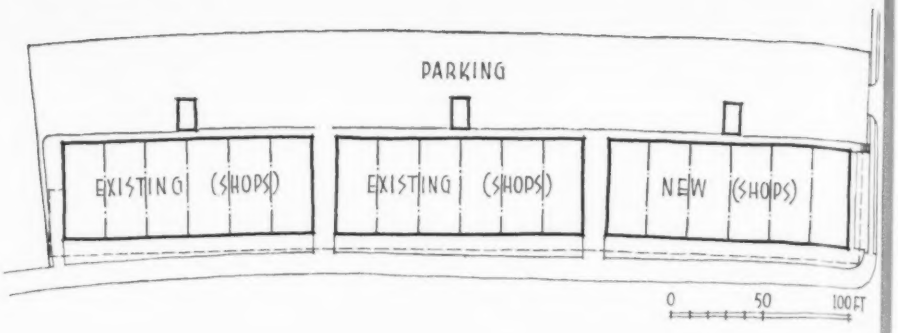
Wimberly and Cook, Architects

COMPLETE SIMPLICITY in both plan and construction mark this new store building at Waikiki. When the project was started only two or three prospective tenants were interested, and maximum flexibility was called for to meet the needs of whatever tenants might eventually rent space. The site, on the grounds of the Royal Hawaiian Hotel, is 120 ft deep, with a 438-ft frontage on Kalakaua Avenue, one of Waikiki's main thoroughfares. Off-street parking was a must. Another requirement, stipulated in the property lease, was that the total height of the building be restricted to 30 ft.

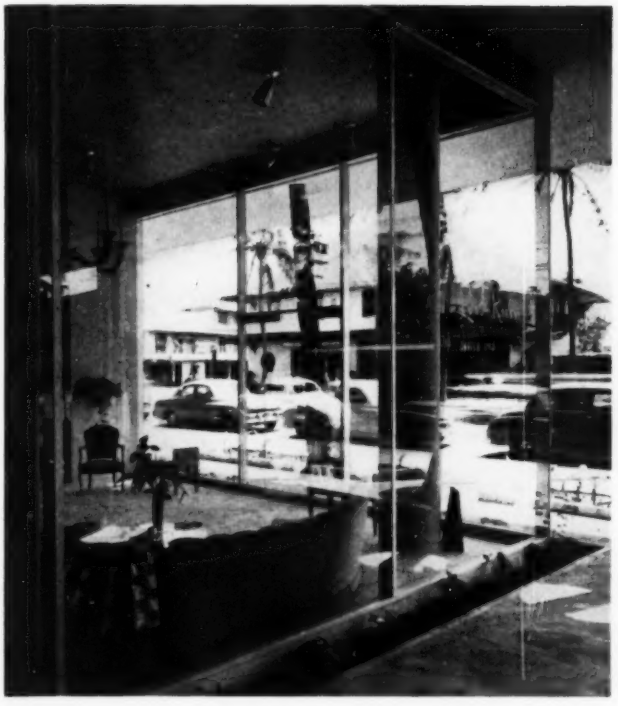
To simplify financing, the building was designed as three identical units, each 136 ft long and 52 ft deep, which could be built one at a time, but which would look like one continuous structure when completed. The three units also made it easier to follow the slight curve in the street and the slight drop in sidewalk elevation.

Each unit consists of six 22 ft 8 in. bays, suitable for use either singly or in combination. Ceilings are high enough to permit installation of mezzanines if desired. Flexibility is further stressed in the basic structure — a simple flat slab resting on three rows of seven columns each. Front walls are glass from floor to ceiling, rear walls concrete block, plastered. Dividing partitions are metal lath and plaster. A parking lot runs the full length of the building at the rear, reached by two 10-ft passages between units.

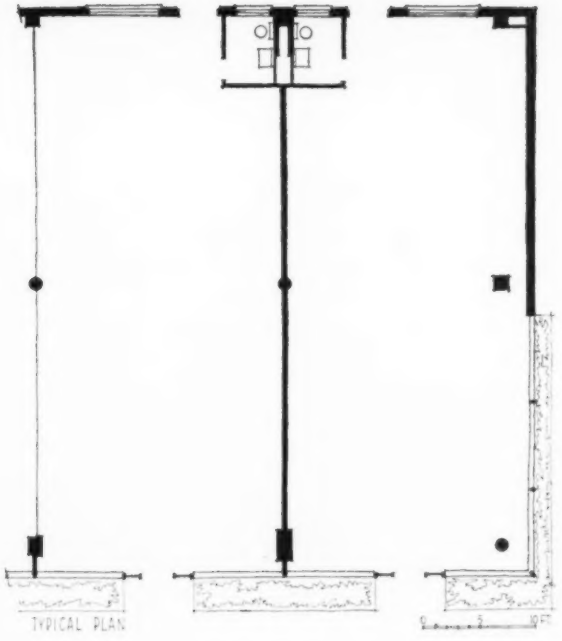
WAIKIKI BEACH SHOPS



The three units are tied together chiefly by continuous concrete overhang. Tenants who leased space before building was finished had privilege of taking allowance for basic design to apply to cost of shop designed especially for their own requirements; McInerny's, in first building (above, right and opposite), had special front using a native sandstone



R. Wenkam



Above: typical interior and corner shops. In latter, street half of end walls is glass from floor to ceiling, rear half is concrete block, plastered

C. Lovat

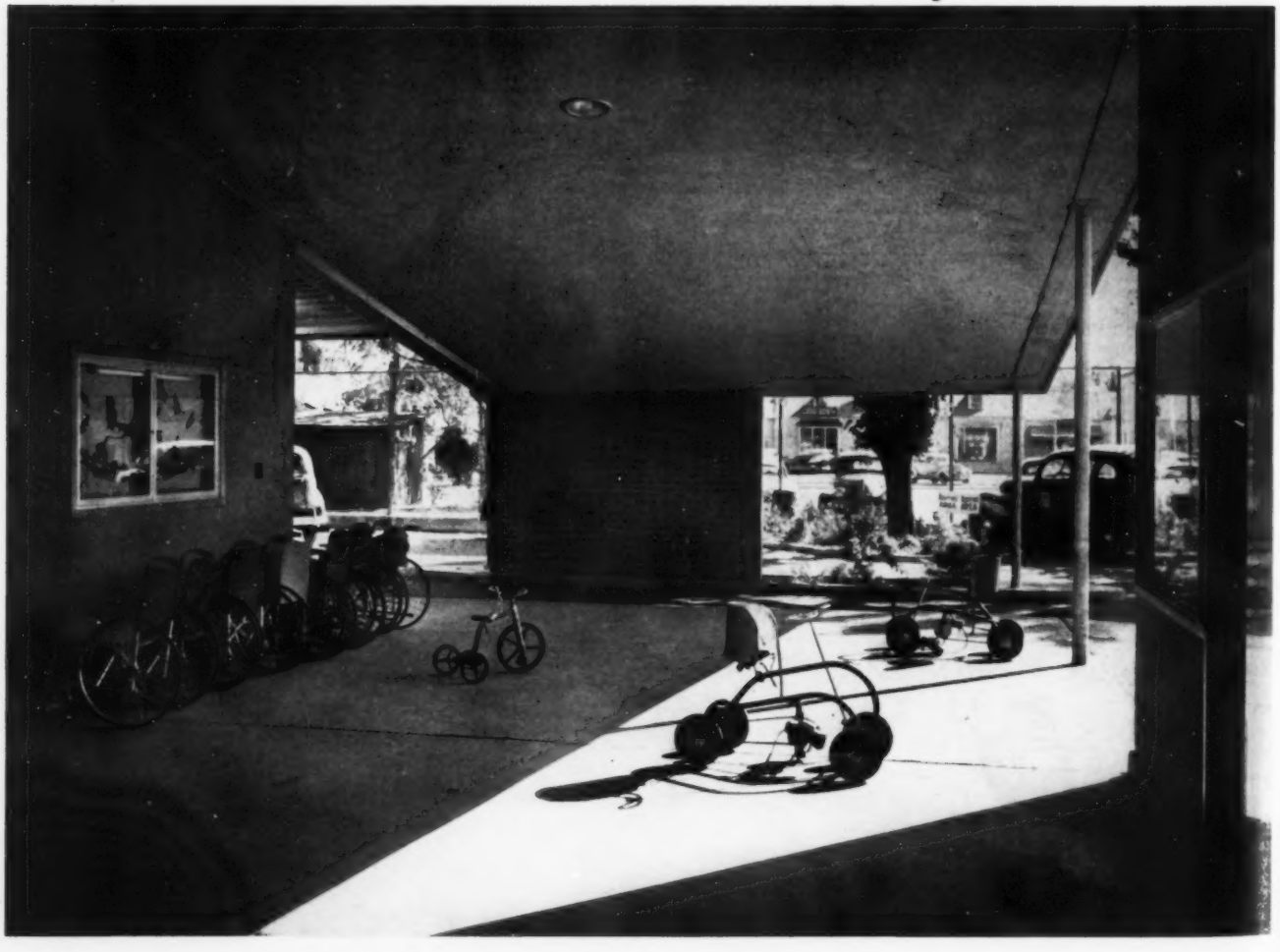
SUNSHINE SCHOOL FOR THE CEREBRAL PALSIED

Fresno, Calif.

David H. Horn and M. D. Mortland, Architects

Clinton C. Ternstrom, Associate Architect

Home instruction or "borrowed" classrooms — makeshifts like the furniture above — were formerly the lot of Fresno County's cerebral palsied children. Now they have their own facilities — below and following pages — specially designed for them



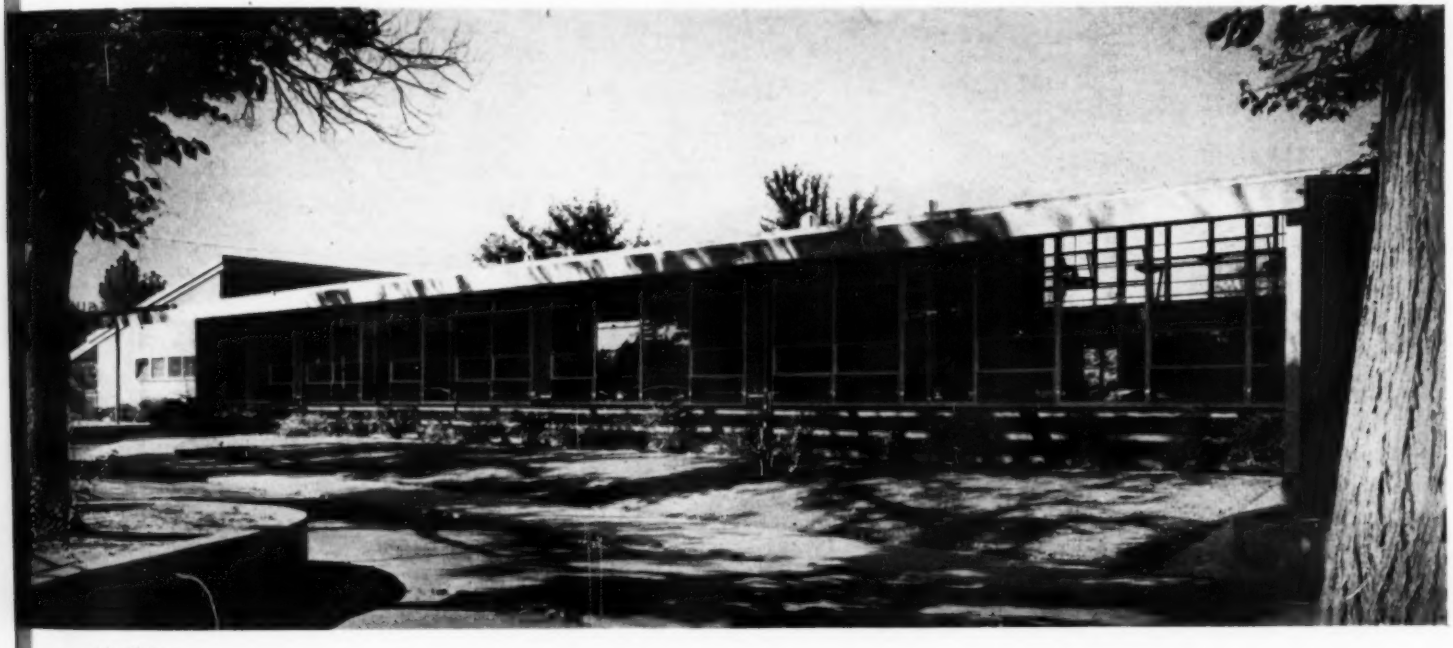
IT WAS ONLY FIVE YEARS AGO that the city of Fresno, Calif., started its program for cerebral palsied children. The first class was organized in April 1947 with eight children, one teacher and a part-time physical therapist, meeting in a single room in an elementary school. In 1948 larger quarters were assigned, ten more children were enrolled, and the staff was increased to two teachers, two physical therapists and two matrons. The amazing growth of the school made it obvious that the program deserved its own permanent home, and work was started in the fall of 1949 on a building especially designed to meet the needs of the handicapped youngsters. Children and staff moved into the new Sunshine School in February 1950.

The architects of the new building had many a problem to solve before the plans were completed. After visiting and investigating all similar schools in central California, they drew up a long list of requirements:

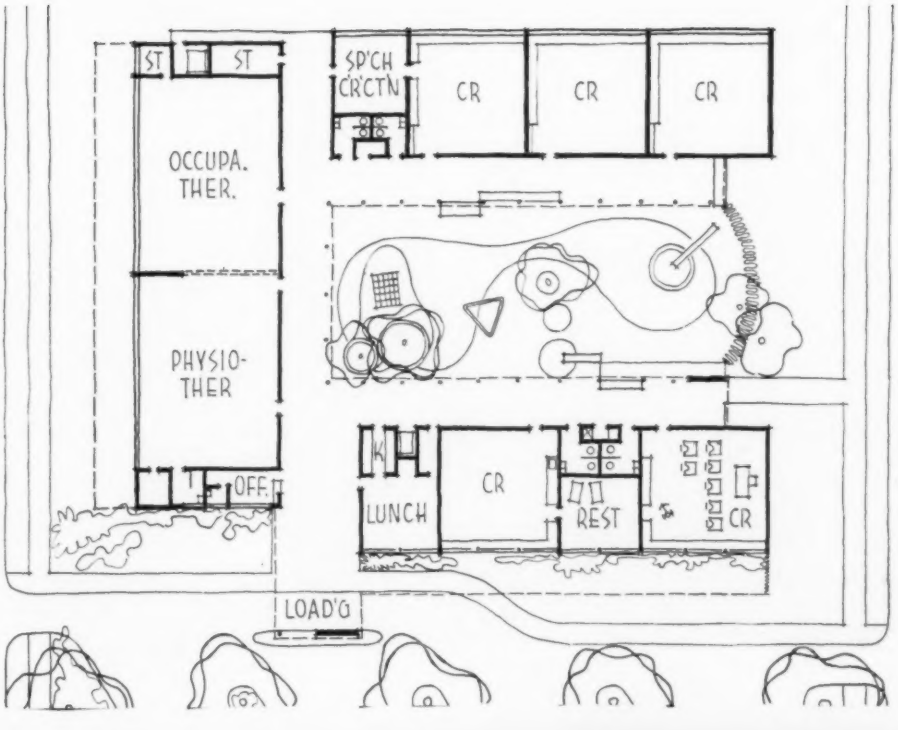
1. *Space* — and plenty of it — for the special equipment, much of it on wheels, needed by the children as they move about.

2. *Only one level throughout*, with no stairs to impede the progress of the children, many of whom are dependent on wheel chairs or other wheeled vehicles.

(*Text continued on page 159*)



Julius Shulman



The entire building is at grade level to accommodate children in wheel chairs and other wheeled vehicles; even door saddles are eliminated. Opposite, covered entrance walk, wide enough for parking and manipulation of children's wheeled vehicles. Above, south classroom wing

Above: entrance porch and south classroom wing, with entrance drive closely adjacent so children can get easily from cars to wheel chairs. Below: physical therapy includes training in walking and stair climbing

Julius Shulman

Julius Shulman

Despite limited budget, the school is a pleasant one visually. Large windows in classroom wings provide adequate light through most of the year, overhangs and louvers eliminate penetration of high sun

David H. Horn

3. *Special toilet room facilities*, including extra space around fixtures and vertical and horizontal bars adjacent to fixtures to aid children in self-care.

4. *Extra large dooruays* to provide clearance for wheeled equipment (3 ft 6 in. was found to be adequate): large kickplates over the lower parts of all doors to protect them from equipment; metal door jambs.

5. *Open-fronted sinks and work counters* to permit access by students in wheel chairs.

6. *Large storage areas* to accommodate storage of specialized and constantly changing equipment.

7. *A protected play court.*

Instead of having an unusually large budget to meet all these special requirements, the architects were faced with very limited funds, and many compromises had to be made. Classrooms, for example, originally were to be about a third larger than the 1000 sq ft provided to accommodate each 15 pupils. Additional rooms for rest, speech correction and consultation had to be abandoned.

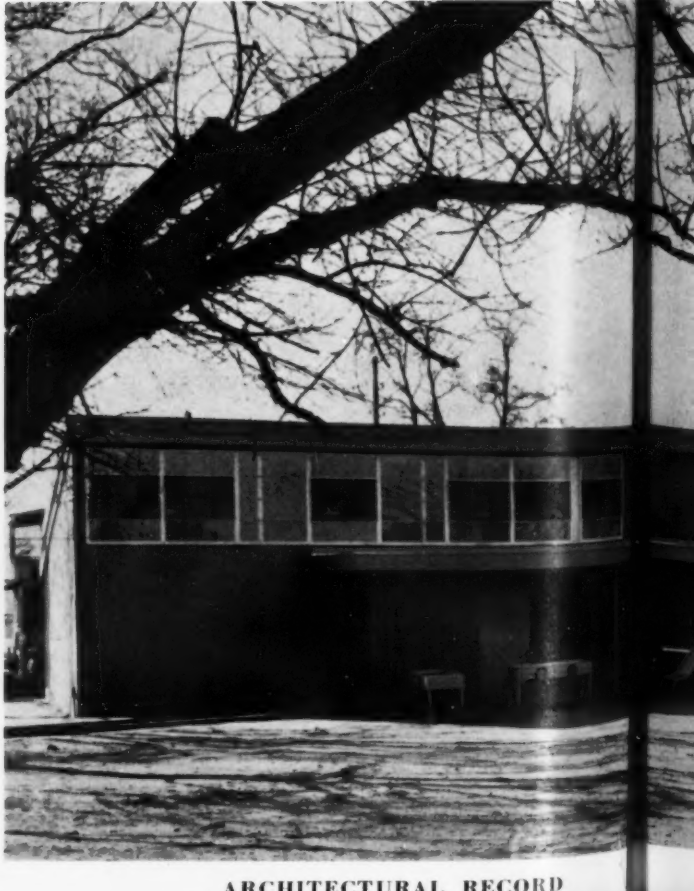
The building was made U-shaped, with classroom wings on north and south and therapy rooms on the

Claspill's Studio

Above: another view of physical therapy room, and a typical classroom. Desks are free-standing, easily shifted

David H. Horn

Above and right: play court is protected by building itself from occasional winds, sun and unwanted watchers



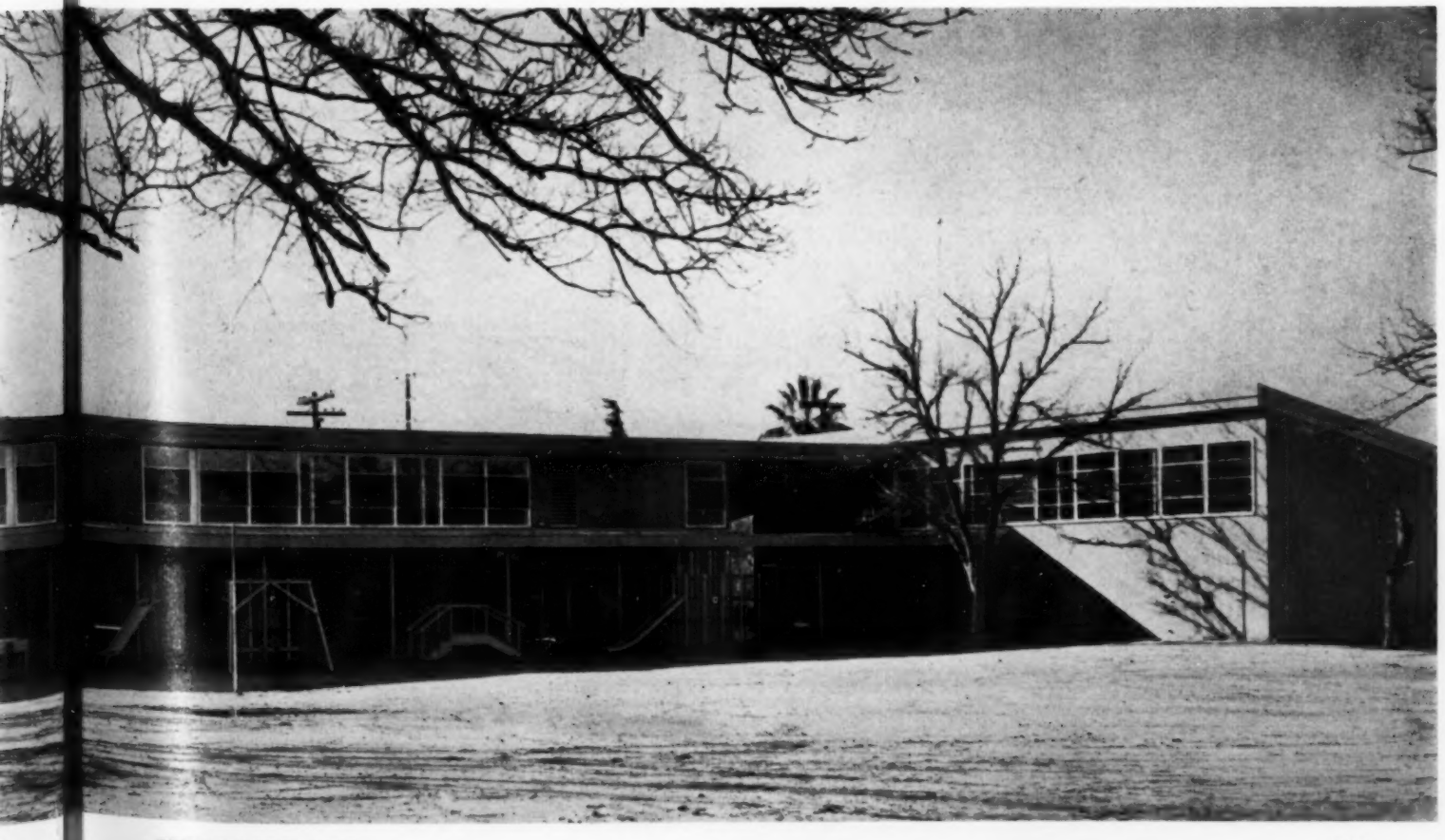
west to provide the protected play court requested by the administration. Both classroom wings have north light and corridors along the court. Louvers over windows on south and west walls eliminate direct sun, and obscure glass in the lower windows of the two therapy rooms prevent observation of activities from outside.

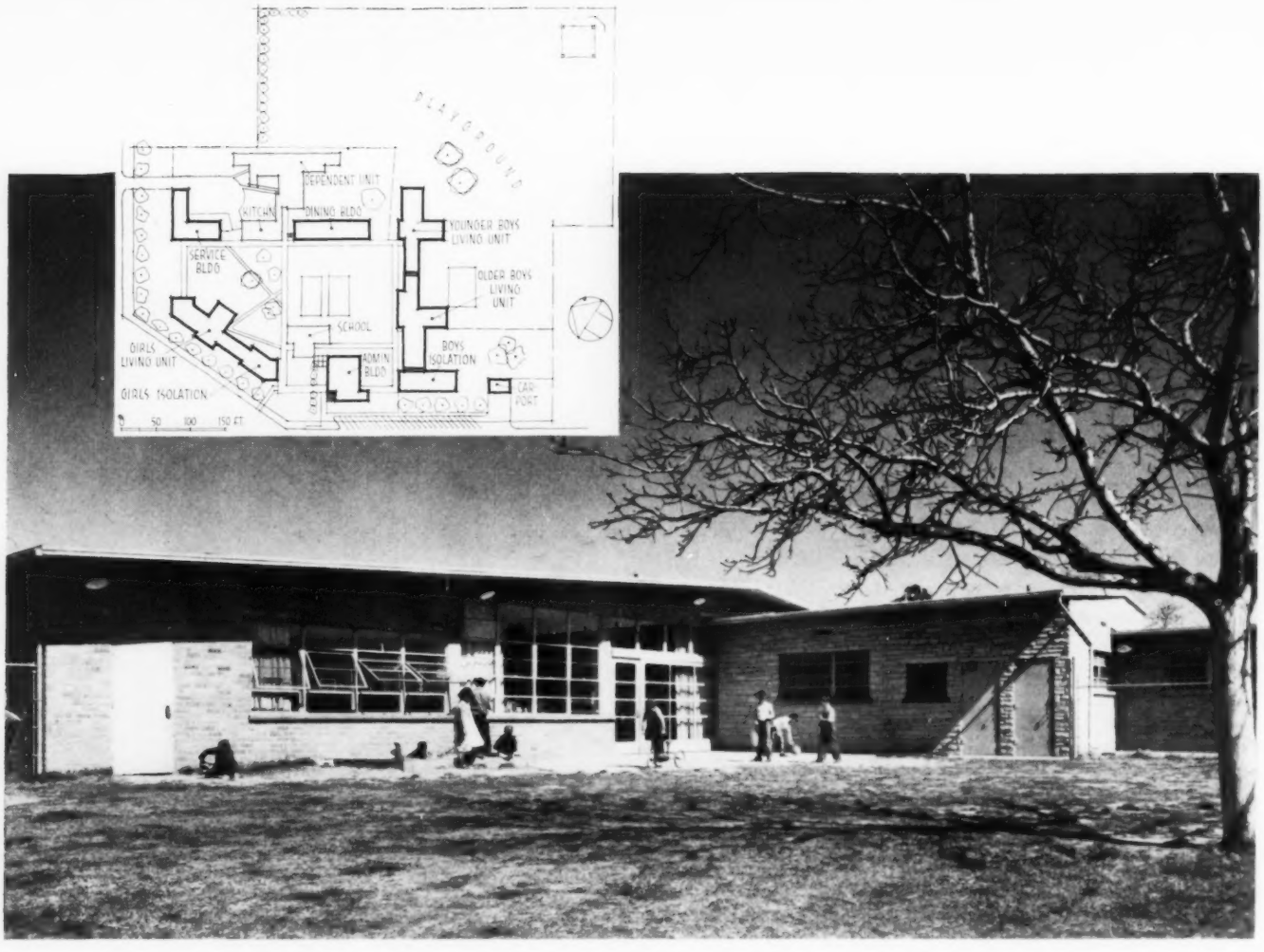
Original plans called for the corridors surrounding the court to be glass-enclosed but available funds would not stretch that far. As things turned out, the open corridors are much more satisfactory — they are more flexible, more pleasant in the warm San Joaquin Valley, and eliminate the expense of inevitable breakage by youngsters using wheel chairs.

The building is steel and wood, on reinforced concrete foundation. Exterior walls are stucco, interior walls are plywood, floors are concrete slab. Construction was in two stages: first, the south wing and physical therapy room, a total area of 6673 sq ft; and second, the north wing and occupational therapy room, a total area of 6855 sq ft. Costs were held to an average of $11.25 per sq ft and $0.85 per cu ft, excluding architects' fee; per pupil cost over 30-year period was $110; per classroom cost was approximately $11,810.

David H. Horn

Claspill's Studio





DEPENDENT UNIT, RIVERSIDE COUNTY JUVENILE HALL

Arlington, Calif.

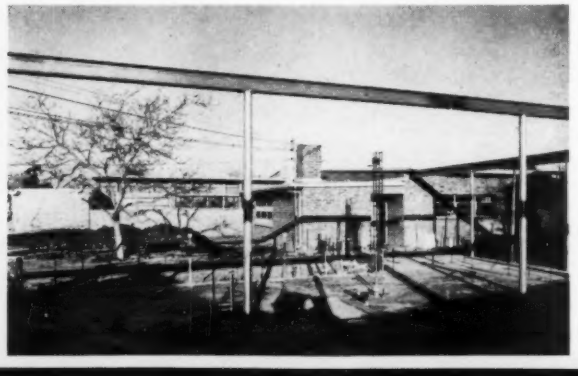
Milton H. Caughey, Architect

ALL TOO OFTEN the child taken by court order from an undesirable home environment is placed in an institution which cares also for juvenile delinquents. That the two groups can be well segregated even so is proved by the plans of the Riverside County Juvenile Hall. The Dependent Unit, shown on these pages, is a completely separate building, with its own dining room and playground, but shares kitchen and administration facilities with the rest of the institution.

A homelike atmosphere, of course, is the chief consideration in the planning of both dependent and delinquent units. Flexibility is almost equally vital for both: the population varies greatly in age, sex and number, and both sex and age segregation is necessary. Constant staff supervision and visual control of all areas is also essential in both departments.

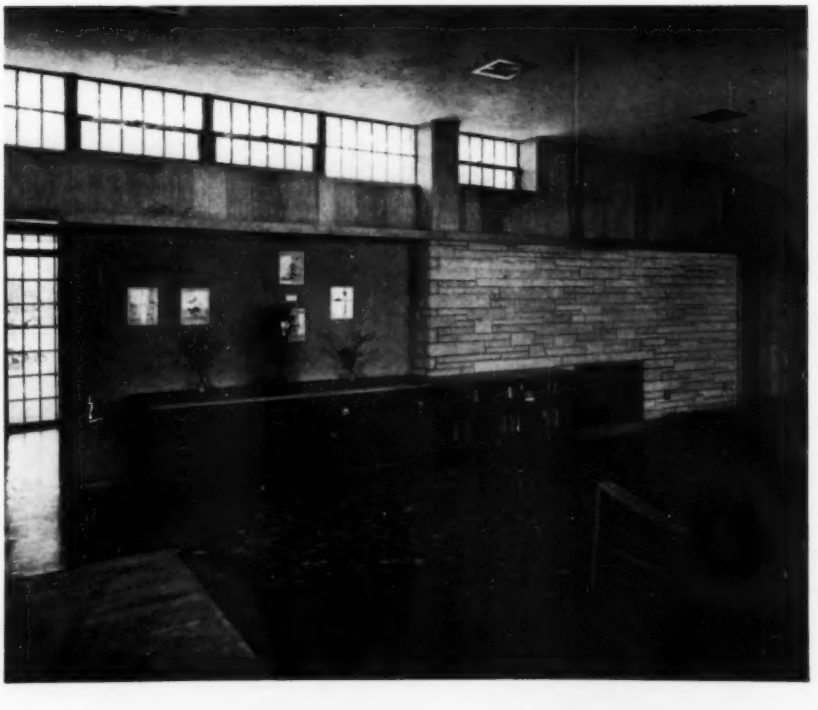
A dependent unit, however, offers still further planning problems because it must provide for children ranging in age from one day to 18 years. At Riverside (see plan, page 164), there is an eight-bed nursery with its own kitchenette; boys' and girls' dormitories, at opposite ends of the building, have six beds each; there are also eight single rooms, three of which, directly behind the control desk, may be used for either boys or girls. A pantry, immediately inside the main entrance, is the connecting link between the institution's kitchen and the dependents' dining room.

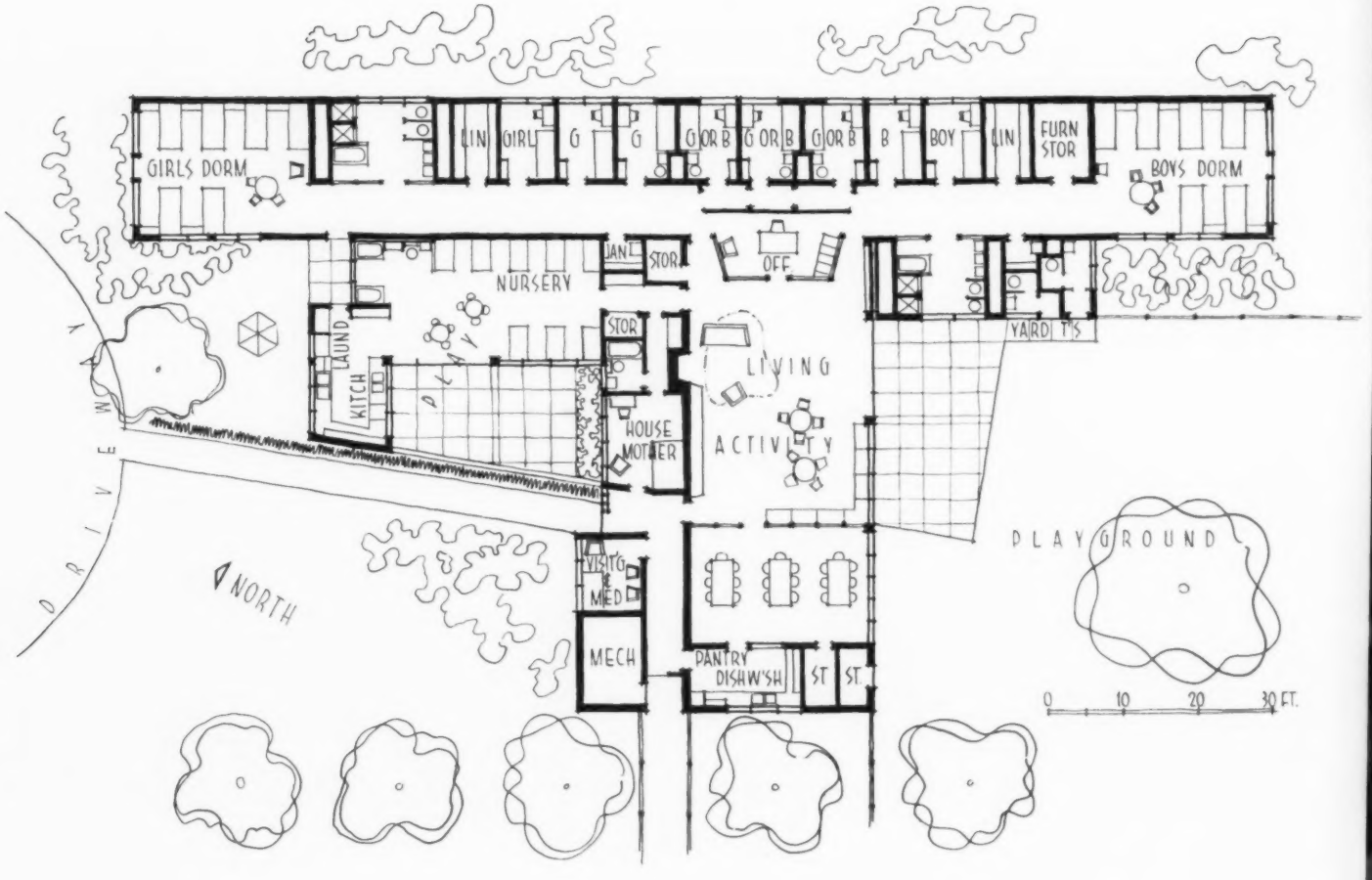
The building has slab floors, reinforced brick walls and slab roof. Sash on the "security perimeter" are psychiatric type; sliding doors between activity and play areas are of safety glass, plumbing fixtures are tamper-proof and heating is by radiant panel (considered safest). Colors throughout are bright and gay, with each corridor door a different color.



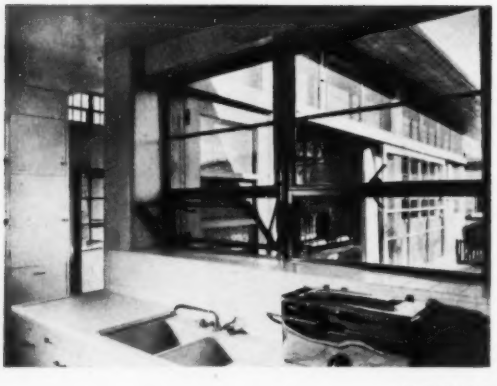
Julius Shulman

Use of stonework on both exterior and interior of the Dependent Unit was expensive, but emphasizes residential character of building. Play area (opposite, top) may eventually be closed off from delinquents' by solid wall to prevent visual contact. Supervisor can watch living room, dining room (behind glass partition in photo above) and all corridors without leaving desk





Dependent Unit has own driveway and entrance, three central single rooms provide locking facilities for unusually disturbed newcomers. Below: left, pantry, equipped for therapeutic dishwashing; right, nursery



Julius Shulman

NAVY BUILDINGS

ARCHITECTURAL RECORD'S BUILDING TYPES STUDY NUMBER 190

Bureau of Yards and Docks serves the Navy with an infinite variety of constructions on shore and at sea; maintains a staff of architects and engineers under the Civil Engineer Corps; but still has a considerable volume of work for private architects and engineers

VARIETY IS CHALLENGE IN NAVY BUILDINGS

FOR MORE THAN 150 YEARS the Navy has been growing with the country it protects, ever adding to its commitments, its technology, its personnel, its shore establishments. Now it must be prepared to fight literally anywhere in the world, and its building organization, the Bureau of Yards and Docks, must be ready to follow the fleet to any point on the globe, with facilities for building anything from a ship to a railroad.

Variety in the Bureau's building operations is probably the greatest challenge to its designers and to architects and engineers who undertake commissions for BuDocks. Probably no other building organization, even including other military establishments, has had to satisfy so many different requirements, for Navy work encompasses virtually all types of civilian and military buildings and then adds on top of those all varieties of more strictly naval operations. Housing, stores, churches, schools, hospitals, power plants, office buildings — the Navy builds them all. Railroads, highways, air fields, bridges, factories, warehouses — the Navy needs all those. Harbors, dry-docks, ship yards, munitions depots — these are only a few. Almost $10 billion went into naval bases in the last war.

Bureau of Yards and Docks is a complete building and operating organization. Its function is to design, build and maintain facilities for the fleet; being, or hiring, every functionary known to building. Its clients consist of all the other offices and bureaus of the Navy listed on the opposite page.

The Bureau of Yards and Docks is staffed by officers of the Civil Engineer Corps, and civilian personnel, all of whom are trained and experienced in some phase of architecture or engineering. This applies to both the central Washington headquarters and district offices. The headquarters staff is organized according to the chart herewith; the district offices are listed on page 173.

After the last world war the personnel of the Bureau was cut back, of course, to a permanent peacetime basis. It is still operating thus, though Korea has enlarged its work. Policy is to maintain its permanent organization and undertake such design activities as will keep this staff occupied and to control design policies and act as

BUREAU OF YARDS AND DOCKS ORGANIZATION CHART

Chief of Bureau
Rear Adm. J. F. Jelley

Deputy & Asst. Chief of Bureau
Capt. A. D. Hunter

Inspector General
Capt. J. J. Chew

Asst. Chief for Management And Comptroller
Capt. C. L. Strain

Asst. Chief for Business Mgt.
Capt. E. L. Hansen

Asst. Chief for Operations
Capt. M. W. Kehart

Asst. Chief for Plans And Research
Capt. William Sihler

Project Management Div.
Cdr. W. C. G. Church, Dir.

Engineering & Technical Services Div.
Capt. G. C. Emery, Director

Maintenance Div.
Cdr. J. W. Silliman, Dir.

Consultants

Engineering Consultant Branch
Cdr. T. A. Woods, Manager

- Architectural Planning & Site Layout — Mr. H. C. Sullivan
- Waterfront Structures — Mr. J. R. Ayers
- Special Structures — Mr. A. Amirikian
- Floating Structures — Mr. W. W. Smith
- Weight Handling & Transp. Equip. — Mr. J. P. Wagstaff
- Soil Mechanics & Paving — Mr. L. A. Palmer
- Soil Conservation & Erosion Control — Mr. W. D. Ellison

Engr. & Arch. Design Branch
Mr. C. H. Trott, Manager

- Architectural Section — Mr. H. W. Meakin, Head
- Structural Section — Mr. E. J. Collins, Head
- Mechanical Section — Mr. H. W. Haller, Head
- Electrical Section — Mr. E. B. Judson, Head
- Sanitary & Civil Section — Mr. H. W. Tipton, Head
- Engineering Aids Section — Mr. G. E. Knox, Head

Specif. & Estimating Branch
Mr. R. J. Potbury, Manager

- Architectural Specif. Section — Mr. C. J. Ebert, Head
- Civil Engr. & Struct. Spec. Sec. — Mr. K. E. Wright, Head
- Mechanical Spec. Section — Mr. E. W. Smallman, Head
- Electrical Spec. Section — Mr. F. B. Anderson, Head
- Procurement Spec. Section — Mr. W. P. Eckerle, Head
- Cost Estimating Section — Mr. G. R. Callis, Jr., Head

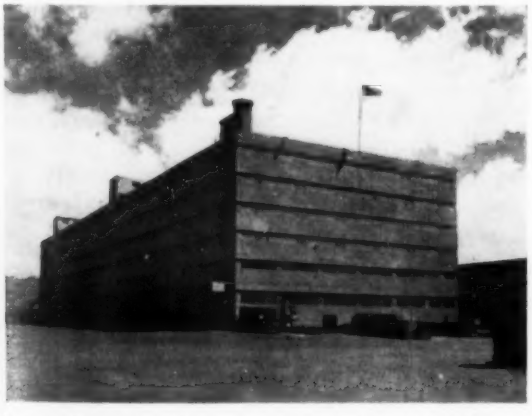
Power & Utilities Branch
Cdr. W. O. Treber, Manager

- Power Generating Section — Mr. L. F. Deming, Head
- Power Distrib. & Comm. Section — Mr. C. D. Friday, Head
- Water Supply & Sewage Treatment — Mr. B. Lenhart, Section Head
- Utility Procurement Section — Mr. H. Treadway, Head
- Fire Prevention Section — Mr. W. D. Stump, Head
- Interference Reduction Section — Mr. S. A. Bennett, Head

Bureau of Yards and Docks Annex, Washington, D. C. (above)

Allied Engineers, Architects

Bureau of Naval Personnel: auditorium-gym, San Pedro, Calif.



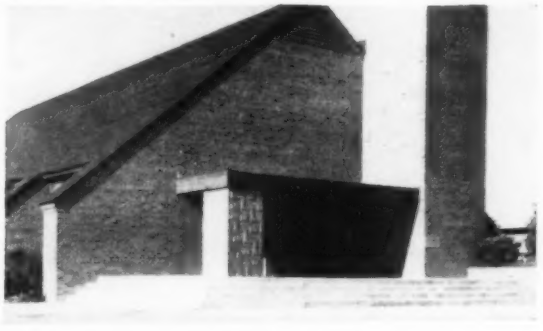
Bureau of Supplies and Accounts: shipping and receiving bldg., Pearl Harbor, Hawaii
Bureau of Ordnance: machine shop, Mare Island, Calif. (left)

consultants to the field on unusual and difficult projects, using private architects and engineers for any extra load. While during the war the BuDocks design staff, including both architects and engineers, was quite large, it was still unable to do more than a small proportion of the work the huge war program involved and concentrated mainly on specialized design and design policies. Now the situation is roughly the same — smaller staff, smaller work load, but a large proportion of the actual drawings for construction projects done by private architects and engineers.

Bureau of Aeronautics: control tower and hangars, Barbers Point, Hawaii

Martin & Curley, Architects

U. S. Marine Corps: chapel, Parris Island, S. C.

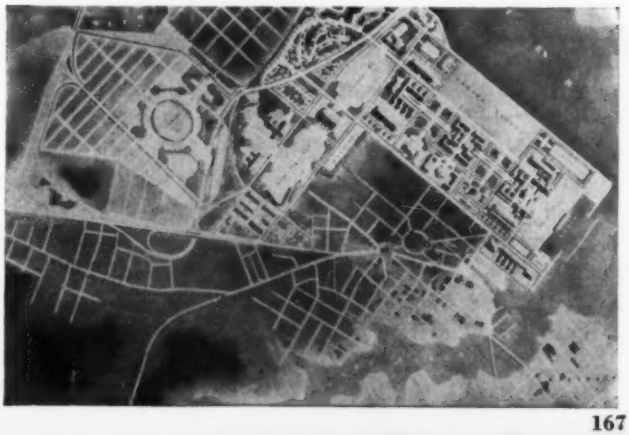


Bureau of Medicine and Surgery: Aeia Hospital, Pearl Harbor, Hawaii

C. W. Dickey & Associates, Architects

Bureau of Ships: foundry, Mare Island, Calif.

Office of the Chief of Naval Operations: master plan for U. S. Naval Academy, Annapolis, Md.



AUSTERITY IS CURRENT NAVY CRITERION

NAVY BUILDINGS

RECENT CONGRESSIONAL EMPHASIS on economy in all military matters has given the Navy a special criterion for all construction work — austerity.

Architects and engineers with commissions for the Navy have always known that economy in design was a major requirement. But austerity is an extraordinarily harsh form of economy, and it is currently changing designs and construction. It is not merely a matter of leaving off ornamentation and doodads; austerity is cutting into space allowances, is paring down normal allotments for equipment and facilities, and generally imposing more rigid restrictions on everything from materials and finishes to whole partis.

BuDocks is, of course, still using all its know-how to produce sound construction while effecting economy in contract prices, for the Bureau must operate and maintain all its constructions. It is in effect its own building client in this respect, and so is fully conscious of the point at which first-cost economy brings excessive operating and maintenance costs. It is rather scrutinizing anew its more or less standard types of buildings to see wherein its normal practices might be made more austere.

The specific news in austerity is that the Bureau is cooperating with the Sub-committee on Military Construction of the Committee on Appropriations, House of Representatives, under the chairmanship of Congressman John J. Riley (South Carolina) in a scrutiny of its current building projects and its current planning in a search for all reasonable economies. All public works officers were alerted last spring, in fact were called to Washington for a three-day session on ways and means of effecting the specific economies considered to be practical. Beyond that, teams of CEC officers and Bureau consultants are visiting the district offices to check individual plans. The first two months of this effort yielded direct savings of over a million dollars in current projects and contracts. This measure of savings is expected to continue, of course, as present blueprints progress into contracts.

Austerity scrutiny centers first on the more repetitive types of buildings — personnel facilities of all types from barracks and mess halls to hangars and warehouses. It is in these types of structures that the Bureau can be most effective in obtaining economies through setting standards of space and types of construction. The principle of economical construction can be applied to all of the Navy's hundreds of types of projects, even the most specialized, but the mandate of austerity applies most directly to repetitive types.

With everybody in America so conscious of mass psychology or morale, the standards of personnel buildings might be discussed at great length. In a recent interview Congressman Riley himself brought up the point. After pointing out that all concerned were alert to the morale factor, he expounded a principle quite close to one of the major tenets of modern design — human satisfaction with a building is not simply a function of its cost, or monumentality, but grows out of the architect's skillful integration of everything from functional suitability to the beauty of proportion and simplicity. If fixed standards seem restrictive in this respect, from the standpoint of service morale there is another reason for them: morale suffers from variations in facility standards in different bases and different services. That is a major reason for design "criteria," or "definitives," the principal purpose of which is to set some limits, both top and bottom, for comparative types of buildings.

It is important that standardization efforts in the austerity program are not intended to dictate too closely the selection of building materials or construction practices. It is well understood that throughout the

Pacific Island Engineers, Architects

Typical repetitive-type Navy buildings for enlisted men: Above, left — barracks, Adak, Alaska. Above — married men's quarters, Guam. Below, left — barracks, Jacksonville, Fla. Below, right — barracks, Guam

Albert Kahn Inc., Architects

Pacific Island Engineers, Architects

country (the Navy in fact builds almost all over the world), there are wide local selections of materials, and methods as well. To force use of imported materials would be obviously expensive, and to push contractors into unfamiliar procedures would be equally silly. New ideas and techniques are always welcome, provided they do not impose such artificial strains on local building.

Austerity considerations can be quite complicated in application to the wide variety of Navy work. Even in similar types of buildings the circumstances may differ depending on the relative permanence of the operation or its location on the globe. But BuDocks experts are giving it intensive concentration in all current operations, and will save money wherever possible without dilution of its reason for existence — to "serve the fleet" with all manner of land-based facilities.

MASTER PLANNING ANTICIPATES EXPANSION

OF ESPECIAL INTEREST TO ARCHITECTS and engineers is a current program of master planning of all permanent Navy bases. Each of the regular Navy establishments of all kinds is under careful study to develop a long-range plan on the recognized theory of master planning as it might apply to a city.

As applied to a Navy establishment, this theory has several special reasons and purposes. Preparedness is perhaps the outstanding one. The last was at least a two-ocean war for the Navy, and permanent and temporary establishments of many kinds were built under frightful pressure. Nobody can say where on the seven seas the Navy might next have to fight, and BuDocks might have to follow the fleet almost anywhere. But certain bases are predictable, and various degrees of expansion can be planned for, just as in a growing city.

Integration of thinking is another reason in the Navy. BuDocks, as already brought out, works for several bureaus of the Navy, each having its own interests and objectives at any given establishment. Yet each base is under an established command. And, of course, the planning staff at BuDocks must accommodate the interests of all these in setting a pattern for buildings and facilities.

Then, too, a Navy base might grow like a city — slowly for some years then in an explosive burst.

So it is considered wise to have a master plan ready for any contingency, so that quick additions will not block logical development in the future; so that any Navy entity, asked suddenly to supply a certain facility, has a guide to immediate decisions.

In the Navy there are three types of planning involved. One is "strategic planning" in which military experts set up exact military missions. Second is "facility planning" which establishes the type and amount of facilities at each shore base to support the strategic plan. And, third, "site planning" — the normal architectural and engineering planning of the shore establishment.

Master planning of today encompasses the several types of construction previously outlined; peacetime, preparedness, wartime, mobilization, also postwar planning involving the conversion back to peacetime operation.

One step in the documentation of the planning study is a comprehensive manuscript, for the Bureau's manual, on planning, which will soon be published as part of the background material for architects, both in and out of the Bureau, who may have a part in the master planning of the Navy's establishments.

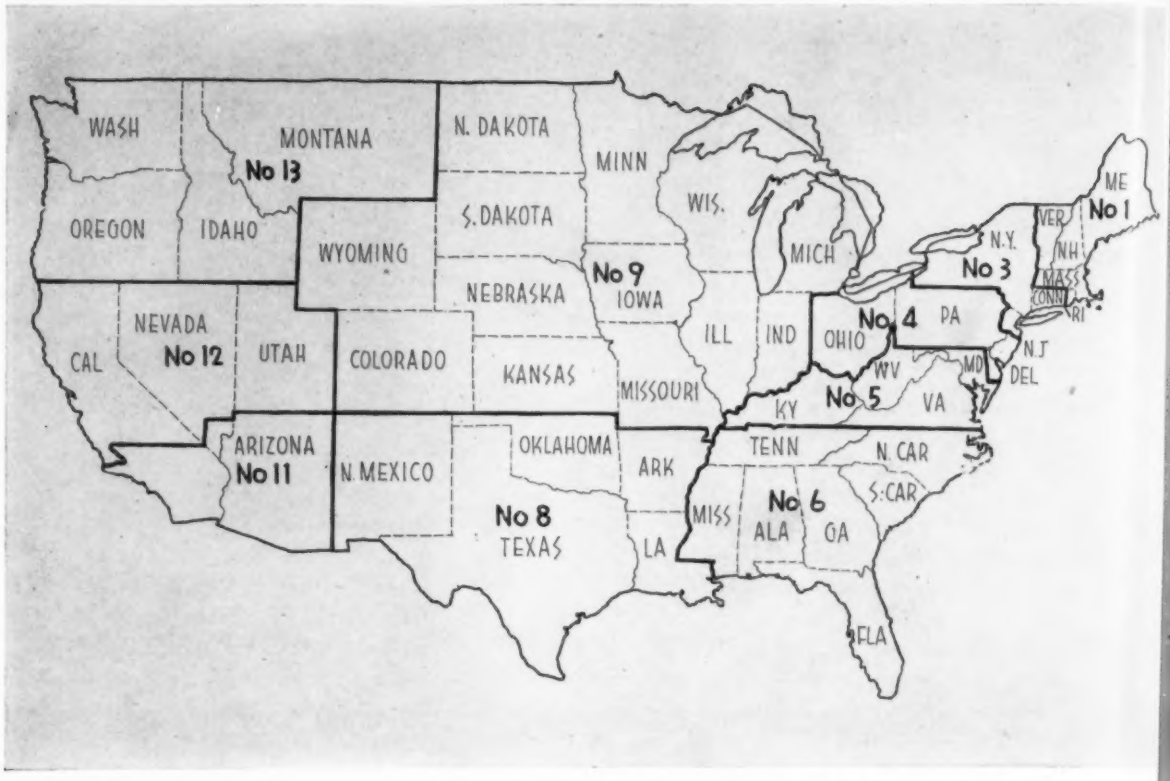
NAVY BUILDINGS

Above: air view of U. S. Naval Academy, Annapolis, Md., as it appears today

Navy Photos

Typical of BuDocks' Master Planning Program is the study (below) for the proposed expansion of the Naval Academy and a related housing development across the river. A recent air view of the same area appears above

NAVY BUILDINGS



HOW TO FILE APPLICATIONS FOR NAVY WORK

EMPLOYMENT OF PRIVATE ARCHITECTS and engineers, "A-E's" in navy parlance, to augment the Bureau's design staff was resorted to considerably during the last war and postwar years. And BuDocks actively encourages architects and engineers to file their qualifications with District Public Works Officers, and possibly with Washington, so that contact can be quickly and intelligently established.

Almost any architect or engineer might find scope for his talents in the very diverse work of the Navy construction program. If he does not have, in his own office, sufficient range of design skills or staff for the required work he can effect combinations or associations which might qualify. Probably most established design offices are already familiar with the policies of the Bureau, and with the procedures, for they were in operation through the war years and since. But the Bureau still has personnel whose business it is to maintain liaison with private architects, engineers and associated groups, and to keep up-to-date records and brochures. For the Navy program is likely to continue active for some time to come. Moreover, in existing world conditions the Navy is keeping prepared for sudden bursts of construction activity should they be required. The Bureau wants to keep in touch with design talent for quick mobilization. Since there are something like 600 different categories of design and construction work, some highly specialized, the talent file assumes some importance.

Most design and construction contracts are given out by the district offices, and ordinarily architects and engineers need make no contact in Washington. If brochures are prepared, however, it is just as well to send a copy to Washington as well as to the district office. They are especially welcomed there if the design staff described includes some special know-how — experience in aerodynamics, for an example. Information on such individual experience is tabulated on I.B.M. cards for quick reference.

The Bureau has architectural and engineering staffs in Washington and in district offices; the present policy of economy, however, keeps these staffs relatively small, so that a great deal of design work has to be farmed out. The central staff is largely occupied with policy making, special design problems, standards, criteria, manuals and overall supervision.

As noted elsewhere in this study, the Navy is more than slightly allergic to the thought of "standard" plans. It does use them, in its "criteria" or "definitives," but the Bureau is keenly aware of the stultifying effect of arbitrary dictates when applied locally. It is also aware that good design is a precious quality. In short, it does not want to stifle initiative and creativeness in the work of its A-E's.

NAVAL DISTRICT PUBLIC WORKS OFFICES

NAVAL DISTRICT	LOCATION	NAVAL DISTRICT	LOCATION
1	495 Summer St., Boston, Mass.	11	1220 Pacific Highway, San Diego, Calif.
3	90 Church St., New York, N. Y.	12	San Bruno, Calif.
4	Naval Base, Philadelphia, Pa.	13	1611 W. Wheeler, Seattle, Wash.
5	Naval Base, Norfolk, Va.	14	Pearl Harbor, Hawaii
6	Naval Base, Charleston, S. C.	15	Balboa, Canal Zone
8	Bldg. 16, U.S. NB, New Orleans, La.	17	Kodiak, Alaska
9	NTC, Great Lakes, Ill.		
10	San Juan, Puerto Rico		

Locations of the various Naval District Public Work Offices listed above are centers BuDocks recommends architects to contact for work within the district. The chart at left gives boundaries of the districts in the U. S.; construction and design in theaters of war are done by SeaBees

As to contacting the Bureau, here are the official instructions:

"Construction contractors and architect-engineers should contact the District Public Works Office having jurisdiction over the areas in which they would like to work.

"Construction contractors or architect-engineers who are interested in performing work for the Bureau of Yards and Docks should provide information on their organization, background, and experience to each District Public Works Officer having jurisdiction over the areas in which they would like to work. The same information should be furnished to the Bureau of Yards and Docks, Navy Department, Washington 25, D. C. If there is a material change in these data, the submission of amended information from time to time would be advisable. The following will be of assistance in recording the qualifications of contractors:

"NAVDOCKS 382 — Architect-Engineer Firm Data

"NAVDOCKS 720 — Contractors' Data Brief

"These forms provide a convenient means of summarizing information concerning interested firms or individuals.

"*If brochures are available*, it is suggested that they be submitted also. It is not intended that contractors be required to incur the expense of preparing brochures as a condition to their receiving consideration; neither is it intended that the forms are required if the brochures contain adequate information. Brochures, when available, are usually of mutual benefit.

"When joint ventures are formed as a means of securing large manpower and equipment potentials and of pooling the talents of contracting firms with special capabilities, information on such groups may be consolidated on the NavDocks form 720. If brochures on joint ventures are submitted, it is desirable that the record of each participant be shown separately . . ."

"Selections of architect-engineers for specific projects are generally made by the District Public Works Officer. For those cases which require approval of the Chief, Bureau of Yards and Docks, the recommendations of the District Public Works Officers are submitted prior to the final selection of the architect-engineer and the award of the contract.

"Contracts with architect-engineers will be negotiated contracts in every case because of the professional nature of the work. Selection of architect-engineers is subject to the following policy:

"Emphasis will be placed on selecting firms or individuals experienced in the design of the particular type of project involved, and having the ability to organize sufficient personnel to expedite the work. Where their qualifications are determined to be satisfactory, preference will be given to firms or individuals located in the same general geographical area as the project under consideration."

INDUSTRIAL BUILDINGS ARE BIG PART OF WORK

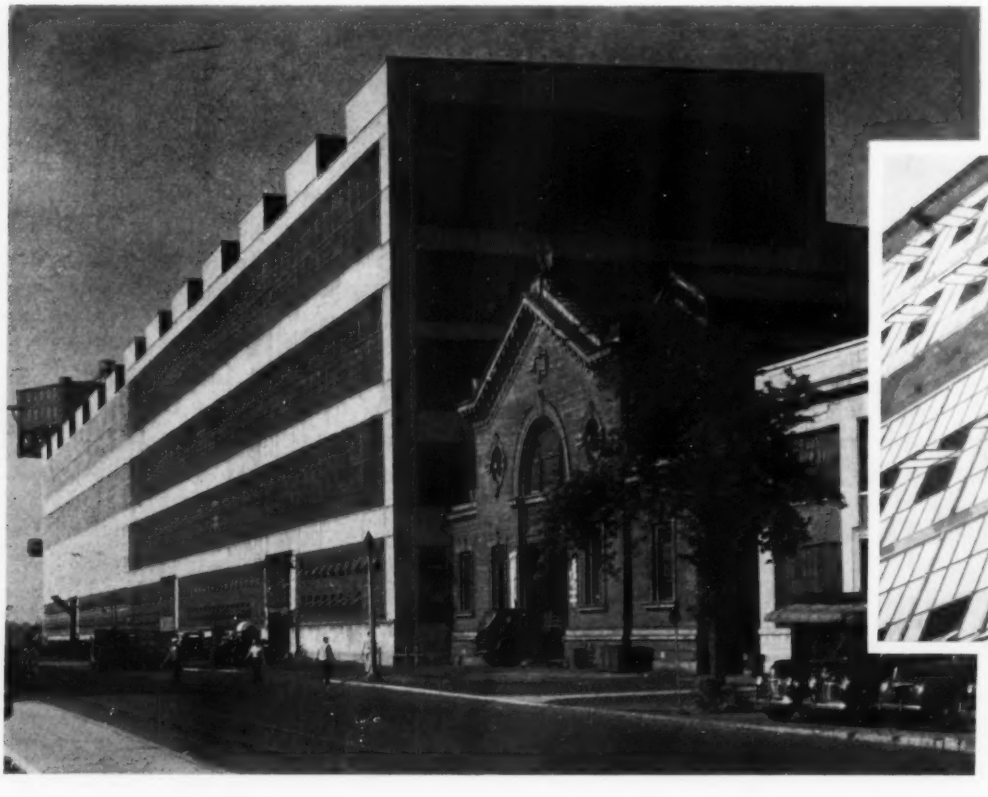
PERHAPS "INDUSTRIAL ARCHITECTURE," when applied to the Navy, most readily brings to mind its countless great waterfront structures — its enormous cranes, docks and piers. Even with the obvious importance of these facilities, they form only a portion of the Navy's industrial projects. The complete range includes shops, factories, mills, foundrys, warehouses — in short, all the vital facilities for equipping, repairing and supplying the land, sea and air wings of the Navy. True, in times of emergency it must rely heavily on civilian industry. In less critical times, however, it must preserve a degree of self-sufficiency for reasons of economy and preparedness.

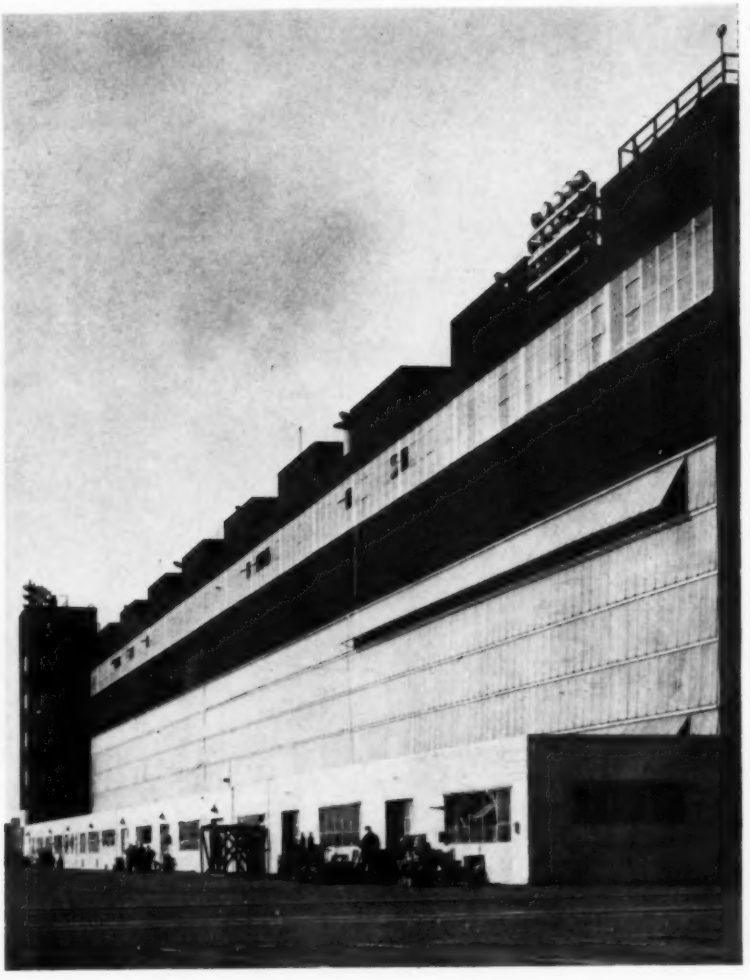
BuDocks looks with pride at the industrial buildings it has constructed, a few of which are illustrated here. The Bureau has continuously sought to incorporate practical and economical new ideas and techniques in each of the projects, as well as to achieve good functional design. The planning has included the skills of specialists on new mass production methods, plant layout, safety and other aspects of factory design. Considerable attention has been paid to the personnel factor in addition to operational and maintenance efficiency and economy. Light, space, ventilation, sanitation and the psychological appeal of color are all given much thought.

Although BuDocks produces some standardized types — the repetitive warehouses and storehouses — the less usual structures reflect a keen interest in structural developments and uses of new materials. In various instances it has employed large steel spans, reinforced concrete and welded rigid frames, precast concrete beams and arches, continuous frames, thin solid panels and curtain walls, large glass areas and many other types, and in each case to provide a particular advantage for a particular building.

Throughout its field of industrial architecture, BuDock's policy might be summed up by linking utility and economy with pleasing appearance and imaginative planning. It adheres to the philosophy that architectural effect is not necessarily obtained by the application of ornament, that a capable architect will produce the desired effect through suitable proportion, mass and composition, and by skillful handling of construction materials.

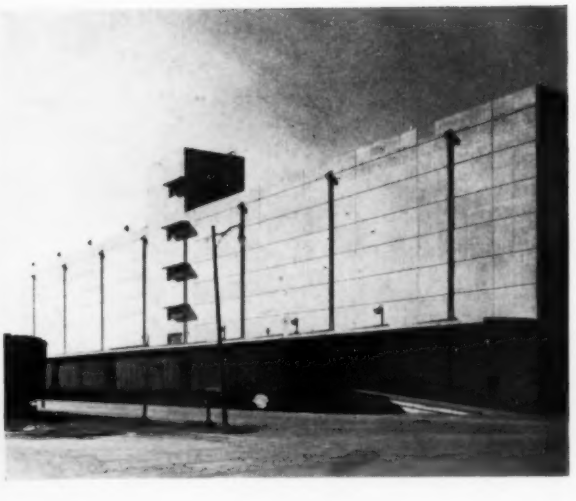
NAVY BUILDINGS



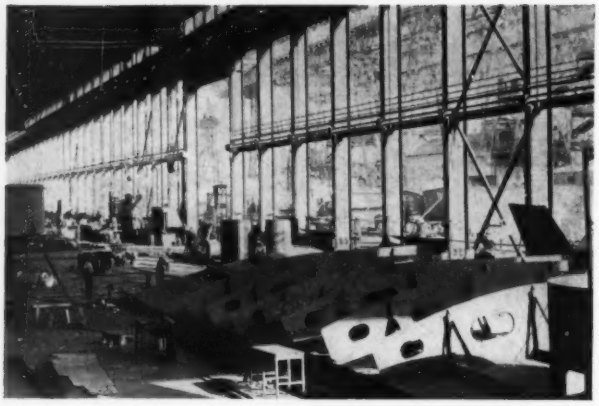


Above: electrical shop, Terminal Island, Calif., is example of concrete rigid frame construction. Right: machine shop, San Pedro, Calif., has thin curtain walls, large areas of corrugated wire glass. Below: warehouse at Naval Supply Depot, Bayonne, N. J., has repetitive roofs of thin shell concrete. Below, right: cold storage building, Oakland, Calif., is of reinforced concrete, has no windows, for easy temperature control

Robert & Schaefer Co., Architects



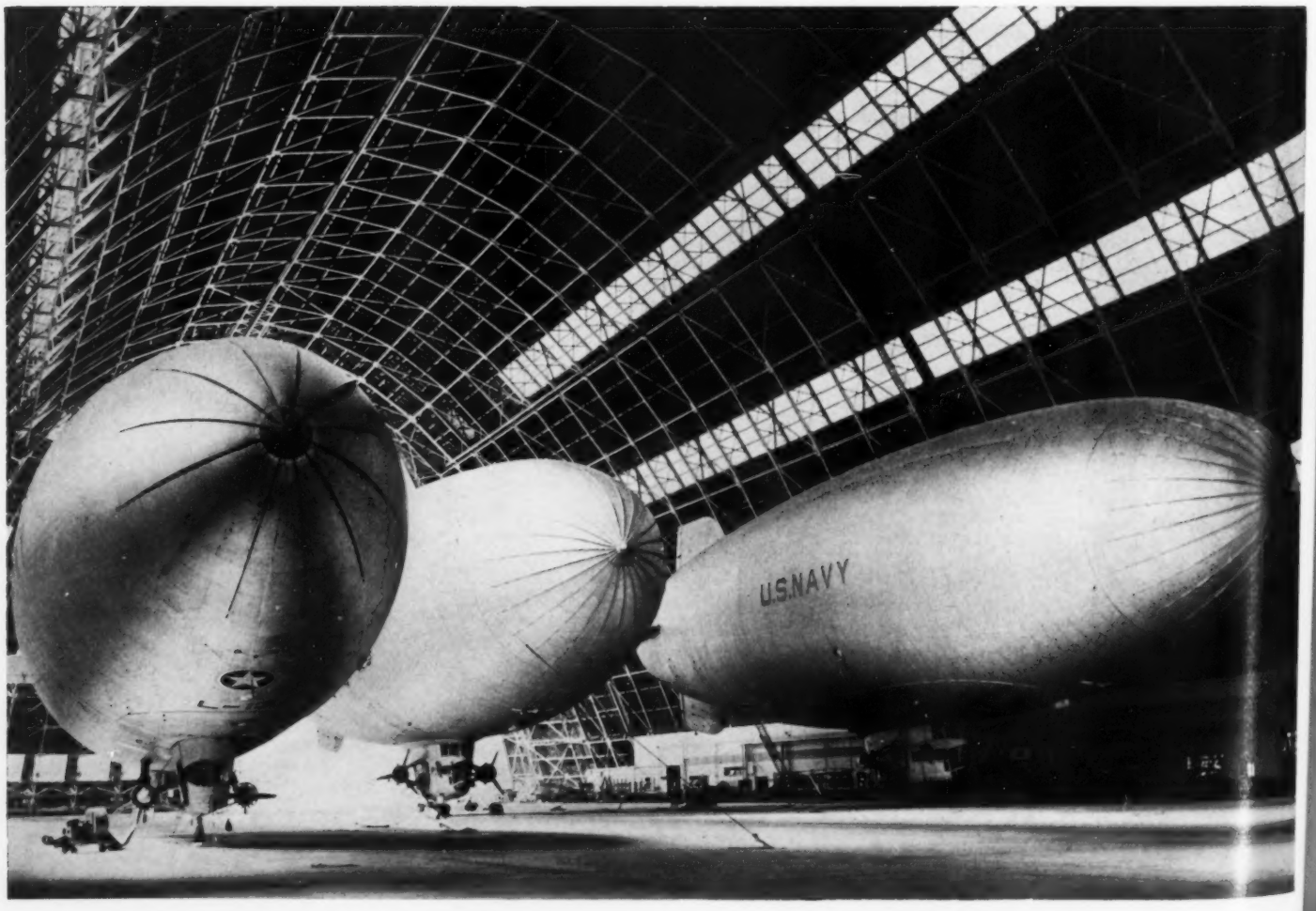
Far left: machine shop, Philadelphia, Pa., contrasts sharply with turn-of-century shop next to it. Inset photo, above left: fenestration detail of supply warehouse, Norfolk, Va.



Left: interior of sub-assembly shop, Norfolk, Va.; one of the first welded steel structures done by the Navy. Below: foundry, Naval Shipyard, Philadelphia, Pa.; rigid frame structure frees interior space for convenient placement of machinery

NAVY BUILDINGS

Below: lighter-than-air hangar, Weeksville, N. C.; two-hinged welded arches are among world's biggest



PAVILLION PLAN FAVORED FOR HOSPITALS

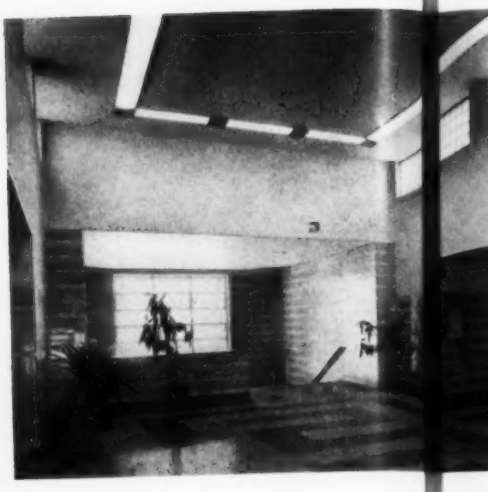
U. S. Naval Hospital, St. Albans, N. Y.
York & Sawyer, Architects

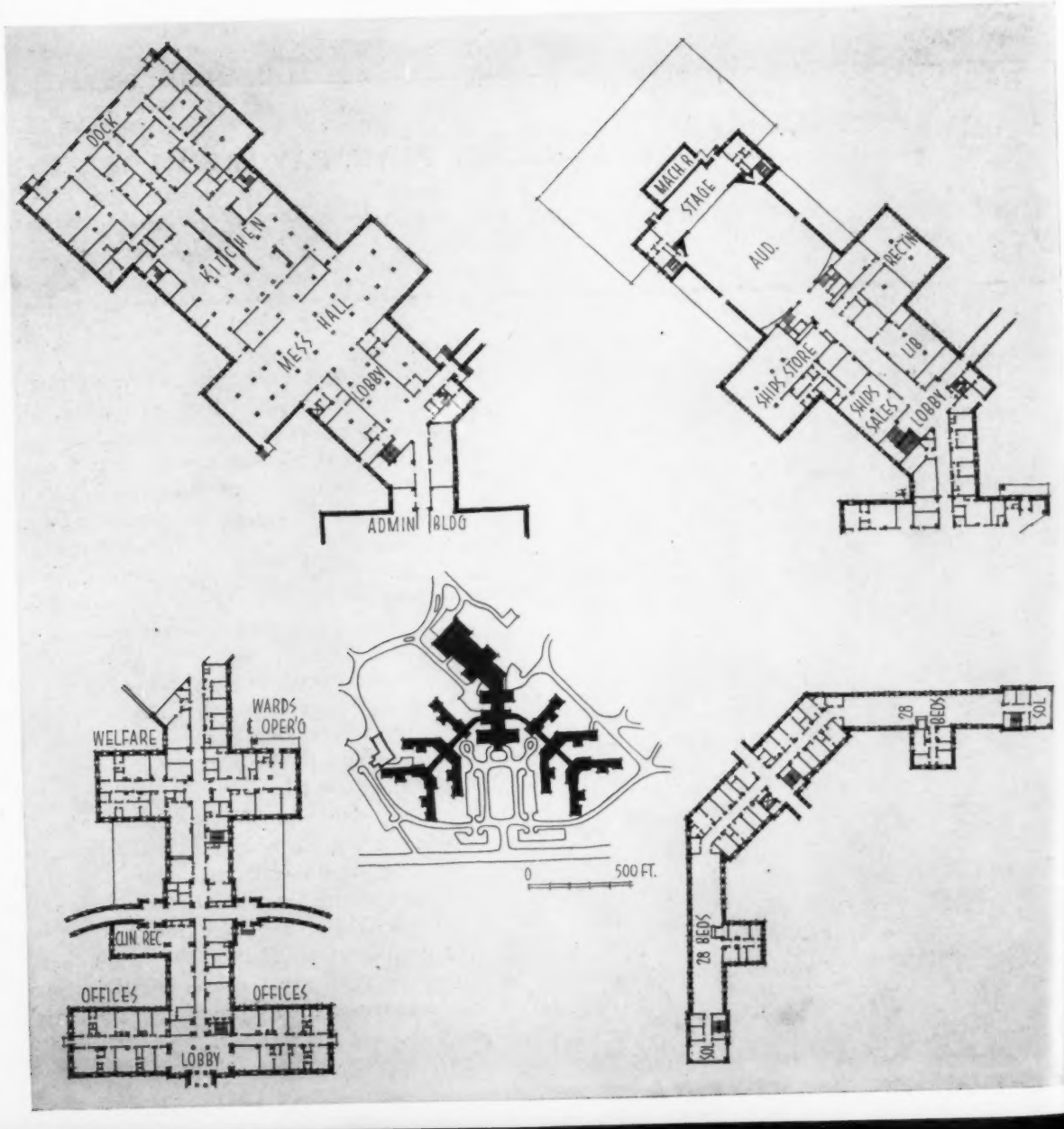
Photos: Sigurd Fischer

ONE OF THE LATEST OF THE NAVY HOSPITALS to be completed is this large group at St. Albans, N. Y., which illustrates official Navy thinking on the subject. The design stems from a pavillion type concept, with a central administration building, backed by a subsistence and recreation wing, and flanked by a series of projecting wings for the wards. The wards themselves are of the open type, with 28 beds each and centralized toilet facilities in a projecting bay. The pavillion type plan arrangement assures a double exposure for each of the wards.

The architects' design for the building simply reflects this plan disposition. Prime consideration was given to careful detailing and good construction in the building, and to the selection of durable and easy-to-maintain materials.

Other plan types for hospitals are under constant consideration. Decisions rest not only on new developments in hospital planning, but on special problems arising from the military point of view. Many areas where the Navy builds are subject to earthquake or typhoons. In possible combat areas, the target that a structure presents is of great concern. Factors such as these explain the continued use of the pavillion plan.

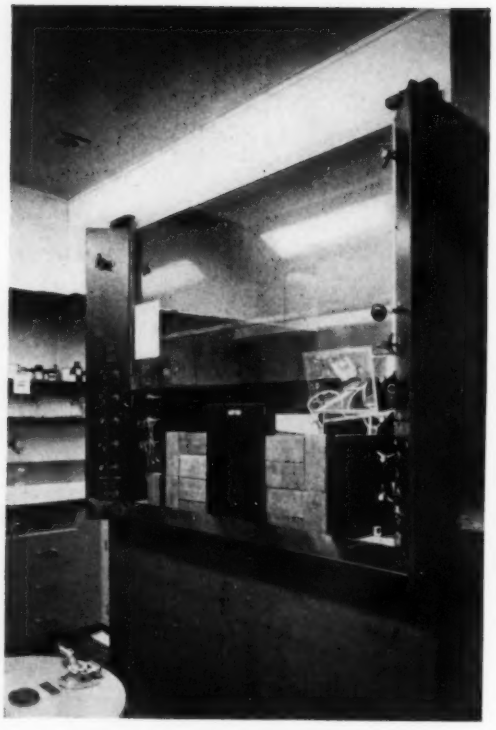




NAVY BUILDINGS

Below, left: key plan of hospital with details of central administration and subsistence building, typical nursing unit. Above, center: subsistence building lobby. Above: occupational therapy room. Below: typical open ward

Photos: Sigurd Fischer



Photos: Sigurd Fischer

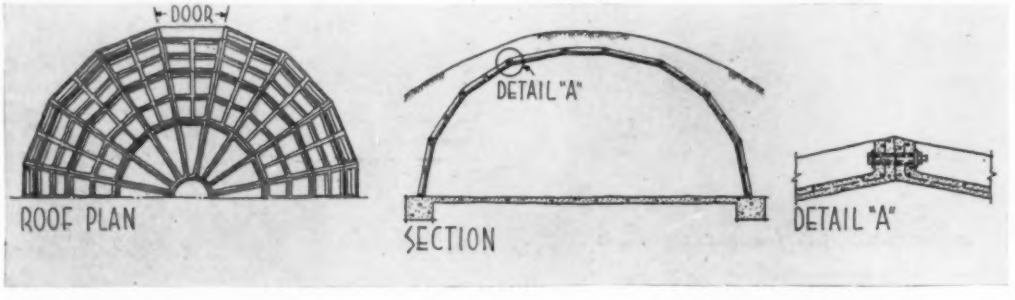
NAVY BUILDINGS

Specialized rooms in the St. Albans Hospital include: Left — radioisotope laboratory; above — sterilizing and supply room; below — typical operating room

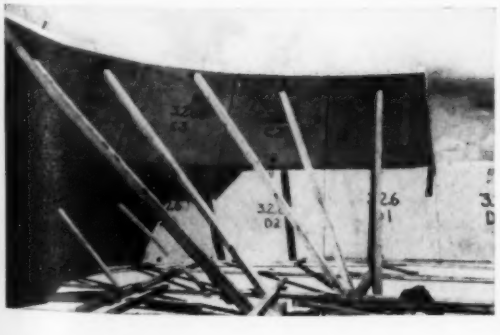
PERSONNEL SHELTERS FOR BLAST PROTECTION

AMONG THE MANY FACETS of the Navy's preparedness program is a project to develop a shelter which will assure a reasonable degree of personal safety for its occupants against atomic blast and radiation. BuDocks' basic research on blast-loading and structural deformation has led to the development of several types of ribbed thin-shell precast concrete shelters, three of which are presented on this and the following page. To provide economical and practical designs, it was considered necessary to utilize the full resistance of the critical structural members, just short of collapse. This led to a sectional framing arrangement which would permit replacement of any parts which developed extensive cracking, spalling or local fractures from blast pressures. The use of sectional precast units also lends itself to either local or mass fabrication, and to stockpiling against an emergency. Similar, ribbed-shell panels could also be used to reinforce or form protective shells for existing buildings.

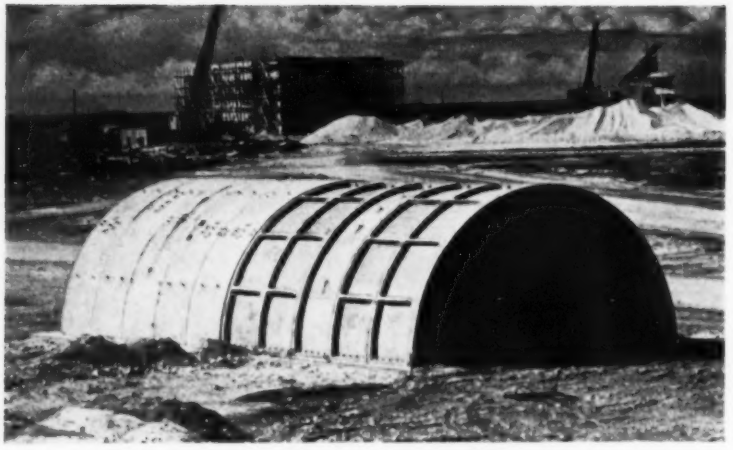
The three shelters shown here were designed to be covered with earth in immediate target areas, left exposed with ribs projecting inward in peripheral areas.



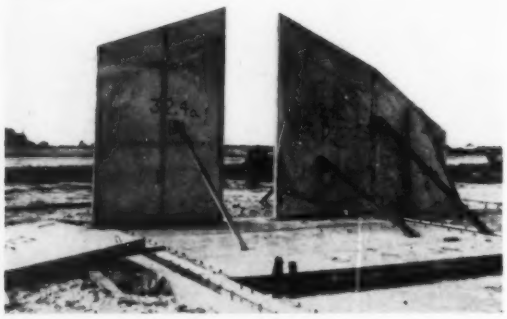
Ribbed-shell dome shelter has trapezoidal panels, bolted together in conical tiers, and circular crown

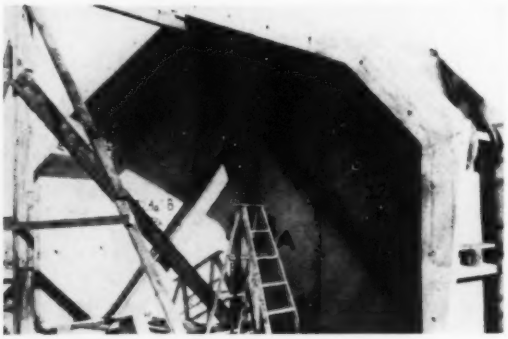


Easily erected panels are of like size in each tier. Units are bolted to precast or poured foundation



Ribbed-shell circular frame shelter (above) is concrete version of "Quonset" hut, has two-segment arch bolted at crown. Ends are flat ribbed panels



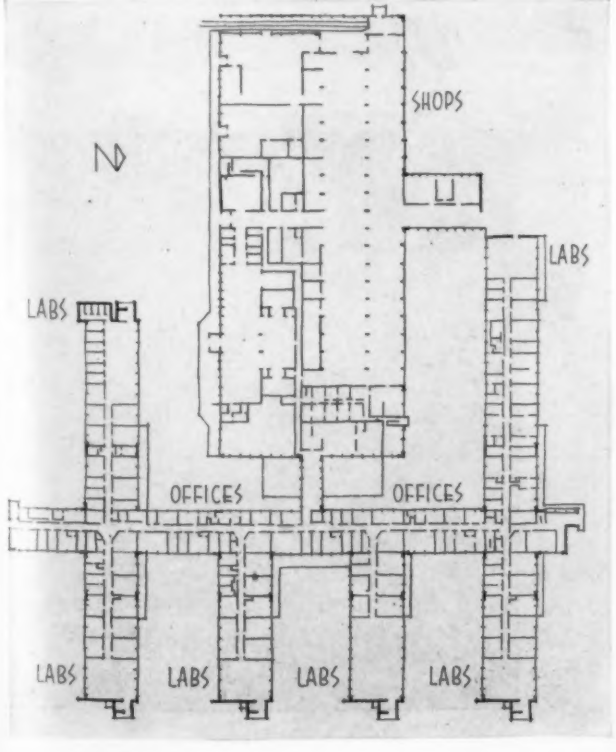


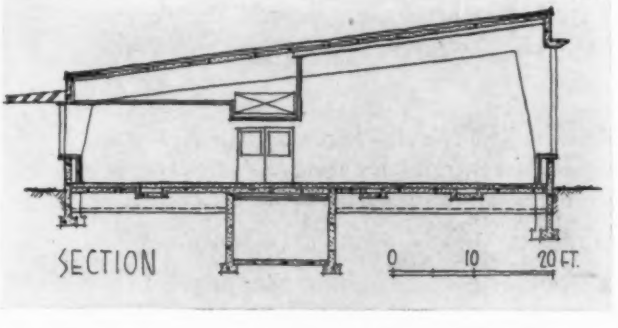
Gable frame shelter provides greater clearance, has deeper ribs to offset less favorable stress pattern

NAVY BUILDINGS

INYOKERN ORDNANCE RESEARCH LABORATORY

THIS NEW TYPE OF RESEARCH LABORATORY, designed for the Bureau of Ordnance, is typical of the special problems in both planning and site conditions that BuDocks handles. The trimly designed reinforced concrete structure is located in the midst of a desert at Inyokern, Calif. Optimum interior conditions were required for the scientific research programs; this was met by carefully designed air conditioning and dust- and glare-control systems. The varying nature of the experiments also called for a maximum of plan flexibility. A rigid frame section (shown below, right) was adopted to free the laboratory wings of load-bearing columns and partitions. All piping and utilities are run in pipe tunnels below the floor. The lab wings flank a two-story office section and a large wing housing machine, carpentry and other shops.





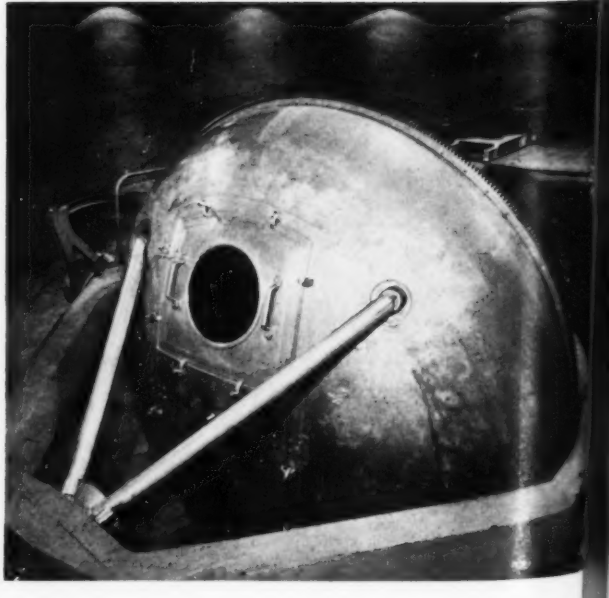
HUMAN CENTRIFUGE TEST BUILDING

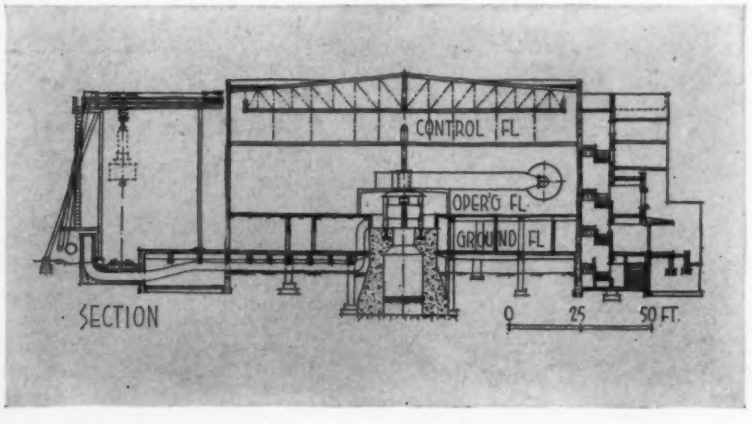
THIS EXPERIMENTAL LABORATORY for the Bureaus of Aviation and Medicine and Surgery was planned specifically to house a powerful new centrifugal machine which subjects pilots to the extreme gravitational conditions encountered in high-speed aircraft. The centrifuge has a 50-ft arm attached to a motor capable of accelerating to 180 miles an hour in 7 seconds; a subject seated in an air tight gondola at the end of the arm can be rotated either forward or backward at the same time he is being whirled horizontally. A variety of instruments record the subject's reactions. The plan and structure of the building were designed to accommodate the functions of the machine and its subsidiary laboratories and facilities, as well as to withstand the weight, stresses and strains it imposes.

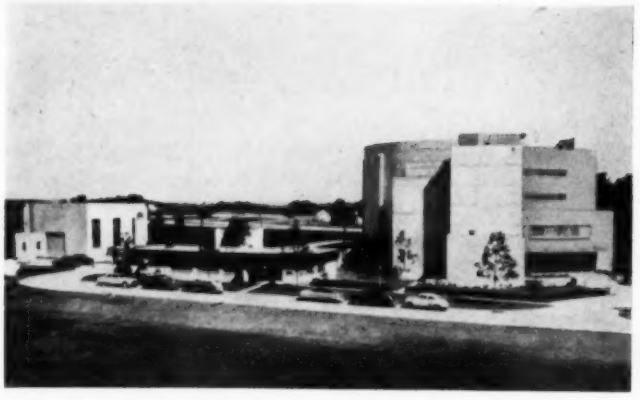
A site was chosen at the U. S. Naval Air Development Center, Johnsville, Pa., where foundations could be built on solid rock to prevent excessive vibration. The building is built of reinforced concrete, with the roof supported on radial trusses.

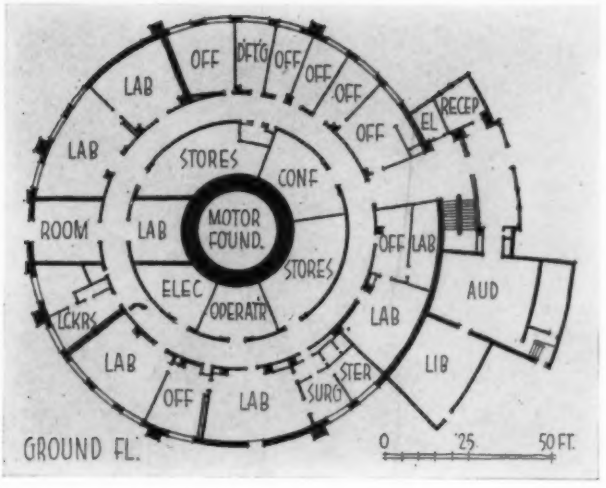
NAVY BUILDINGS

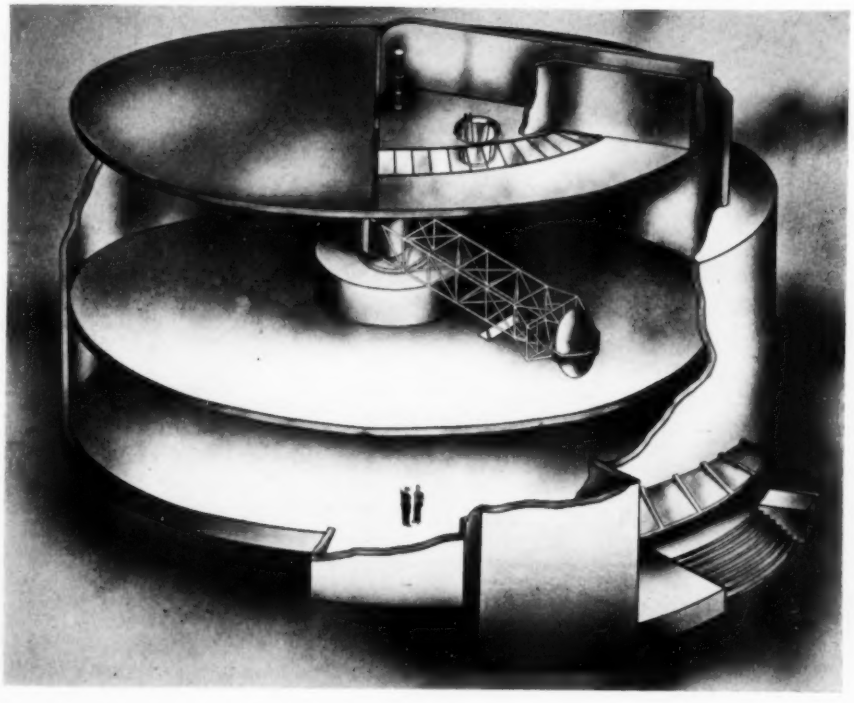
The centrifuge (far right) around which the building was designed, can exert a force equal to 40 times the gravitational pull of the earth on a pilot seated in the gondola (closeup right)





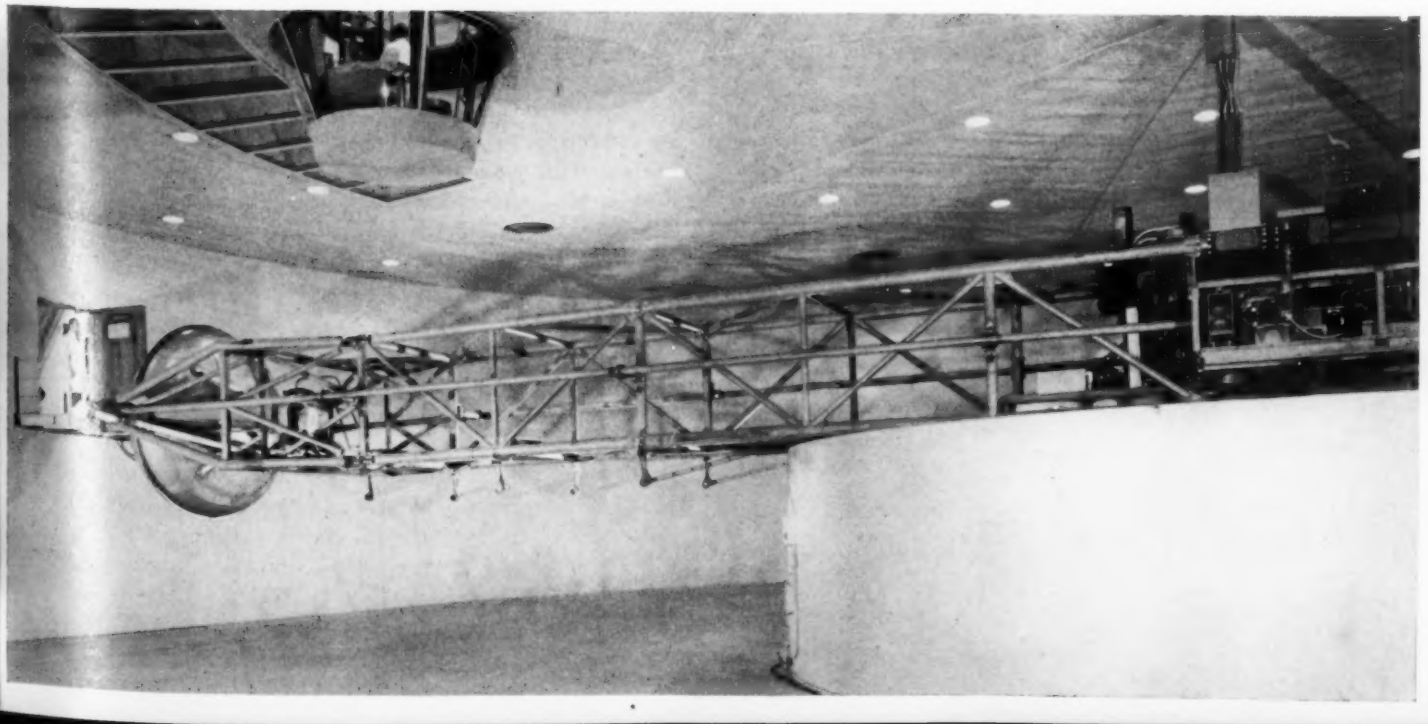






The first floor of the building (plan above) is allocated to the entrance lobby, offices, labs, an auditorium, shops, store rooms and a corridor for installing or removing the huge centrifuge motor. The second floor houses the centrifuge itself. The entire chamber is shielded with copper to eliminate electrical interferences with recording instruments. A mezzanine floor over the lobby and auditorium contains an emergency physiologists' room and a low pressure chamber. The top floor has the recording room, physiologists' space and a glass enclosed control blister which is suspended down into the centrifuge chamber

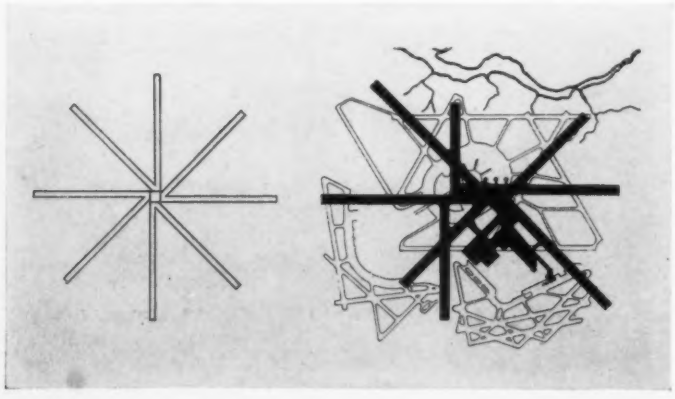
Equipment Designed By—Special Devices Center, Office of Naval Research and McKeirnan-Terry of Harrison, N. J.



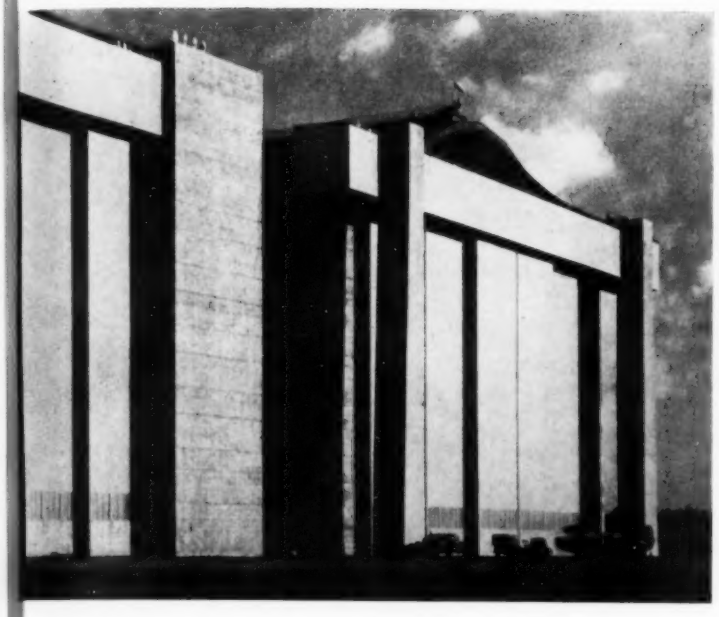
NAVY BUILDINGS

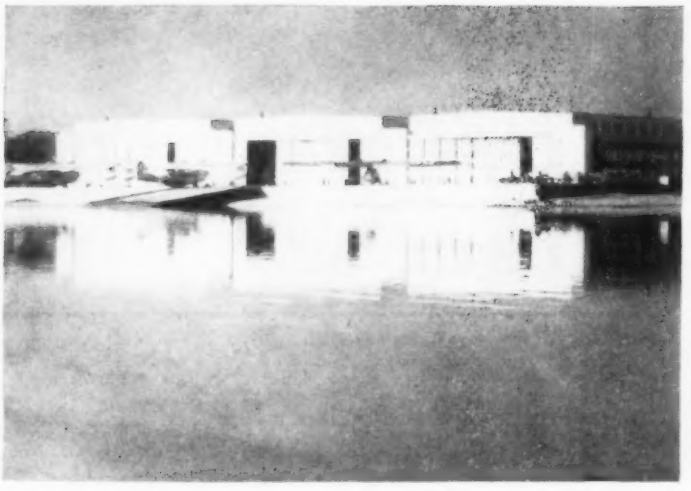
NAVY AIRFIELDS EXPAND FOR JETS

THE RAPID PROGRESS IN THE DESIGN of military aircraft during the postwar years has caused a tremendous spurt in the planning, design and construction of airfields to keep apace. The new jet planes and heavy bombers have heavier wheel loads, increased landing speeds, and rely heavily on instrument flying. These developments require longer, stronger and more durable runways than were necessary heretofore. As the Navy has practically changed over 100 per cent from reciprocating to jet engines, BuAir has set up a long range program for the development or conversion of appropriate fields. Six master operational bases are now under construction, three on the East Coast — Oceana, Va., Cecil Field, Fla., Brunswick, Me. — and three on the West Coast — Whidbey Island, Wash., and Miramar and Moffit Field in California. These are to be supplemented by a series of auxiliary bases, some operational, and some industrial for maintenance and overhaul. In case of emergency, the auxiliary operational fields would in turn be converted to master bases with satellite fields. To keep up with the preparedness program, bases are being developed simultaneously in a three part program: first, runways and vital jet field storage facilities; next, hangars; and finally, the variety of buildings and facilities needed to complete the fields.



Although there can be no static rules to the planning of runways, due to the almost continuous modification of military aircraft, BuAir currently favors a flexible offset pattern. This wheel-spoke pattern (see diagram far left) eliminates taxiing, has control tower as center for all landings and take offs. Such a plan can be expanded by parallel duel runways. A typical airfield of this type is the Marine Corps Air Station at Cherry Point, N. C., shown at left superimposed on plans of three of the larger public airports.

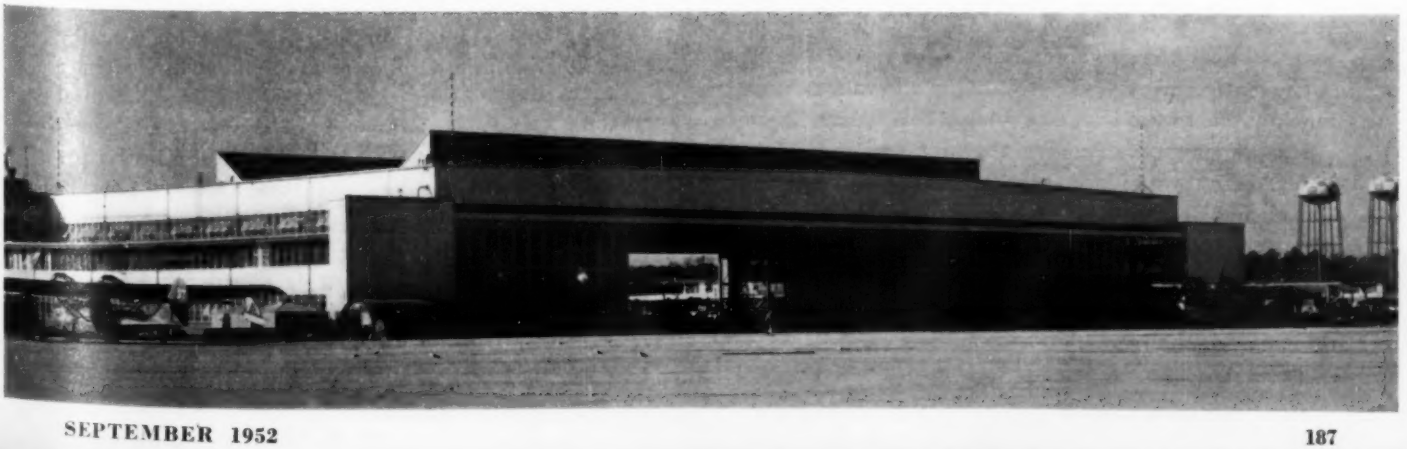




The Navy builds four categories of air facilities: lighter-than-air stations, seaplane bases, landplane bases, and seaport and industrial air stations. Several typical examples are illustrated here. Far left: lighter-than-air hangar interior, Weeksville, N. C. Left: exteriors of similar hangars, Richmond, Fla. Above: Seaplane hangar, Pensacola, Fla. Below, left: Naval Air Station, Barber Point, Pearl Harbor, Hawaii. Below: nose hangars, Guam

The photograph below shows a typical seaplane hangar at Jacksonville, Fla.

Albert Kahn Inc., Architect



CRITERIA
DEFINITIVES
STANDARDS

ARCHITECTS AND ENGINEERS in the Bureau of Yards and Docks cringe slightly at any mention of "definitives," but they do have them for many types of buildings. They do not like the basic idea of "standard plans," and are always afraid that their work in "criteria" or "definitives" will be misunderstood, but they yield to the necessities of a huge operation with similar types of buildings erected in many places and many circumstances, and to the need for keeping these buildings comparable with similar ones at different bases, and comparable with similar types built by other military services.

Obviously, central headquarters must fix standard allowances for repetitive types of buildings like barracks, mess halls, storehouses, dispensaries. Many factors in design depend on top-level policies, or on requirements established at department level, as, for example, design of military hospitals. These matters are not to be left to individual inspirations, no matter how refreshing those might be. At BuDocks, however, there is full realization that any stated standard is likely to be inapplicable in some details to some given location, or might be "copied cold" when it ought to be changed.

But the definitives and criteria do prove useful in the field, for they state the Navy's wants in easily understood terms, and they serve as a check list reminder of many items which fresh inspiration might just overlook.

Standards at BuDocks include permanent, semi-permanent, emergency (built during the last war), and mobilization (definitives ready for a quick, new emergency program). Permanent is of course for continued use in permanent bases, with minimum maintenance expense. Semi-permanent differs very little from the first, but contemplates higher maintenance costs for continued use. Mobilization is the lowest standard, with smaller space allowance, fewer facilities, use of non-critical material and so on. The mobilization drawings envision a rapid building program of minimum buildings, with SeaBees buzzing about the world.

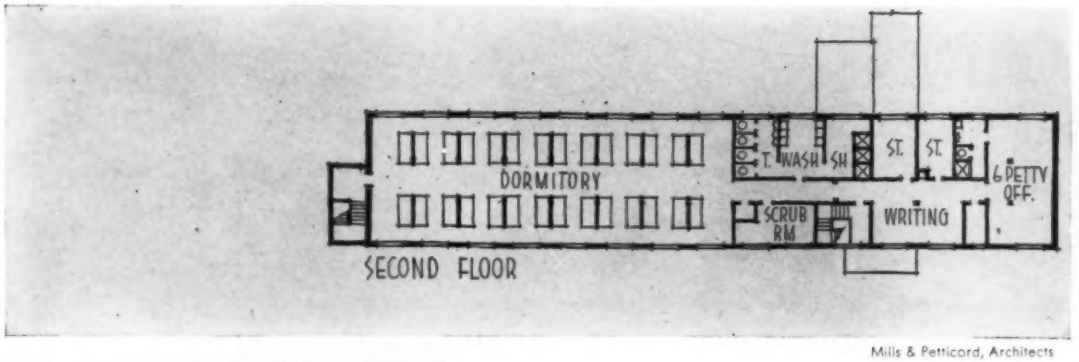
Currently, austerity is trimming allowances pretty much all along the line, as explained elsewhere.

It is understood, of course, that any prepared criteria apply only to standard, repetitive types of buildings. There could not possibly be any frozen or canned designs for a centrifuge building, a guided missile laboratory, a tropical harbor, a dirigible hangar, but these unique constructions are actually more typical of Navy design work than the ubiquitous barracks.

ENLISTED MEN'S
BARRACKS

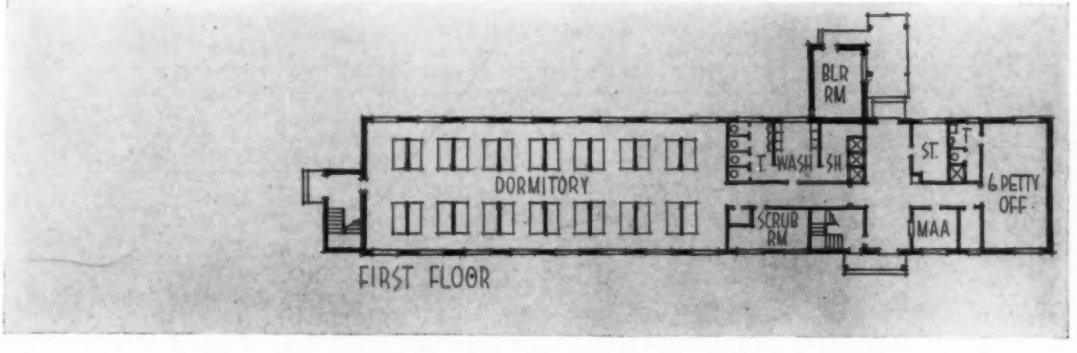
Each of the military services has an explicit program to achieve a large degree of standardization and economy in its 1953 program for repetitive type buildings. In the barracks category, each is working toward a separate solution peculiarly adapted to its own requirements. The principal saving sought through these standard designs is the sizeable reduction of the gross area per man, without reducing each man's actual living space. The directions Navy thought is taking along these lines are illustrated in the two examples on the facing page. The rendering and top two plans show a two-story mobilization type barracks for enlisted men. This scheme was devised some time ago for emergency use. The bottom plan shows one of the floors of the most recently issued scheme for a permanent type enlisted men's barracks. This scheme has three storys, houses 172 men single bunked. It is sub-divided into three 48-bed dormitories for enlisted men and two 14-bed dormitories for Petty Officers or Non Commissioned Officers. Locker-height partitions divide rooms into cubicles of four bunks each. The scheme allots 72 sq ft per enlisted man, 82 sq ft per N.C.O. and an overall gross area of 125 sq ft per man, including service areas. Emergency double bunking must maintain 50 sq ft per man, net area.

Mills & Petticord, Architects

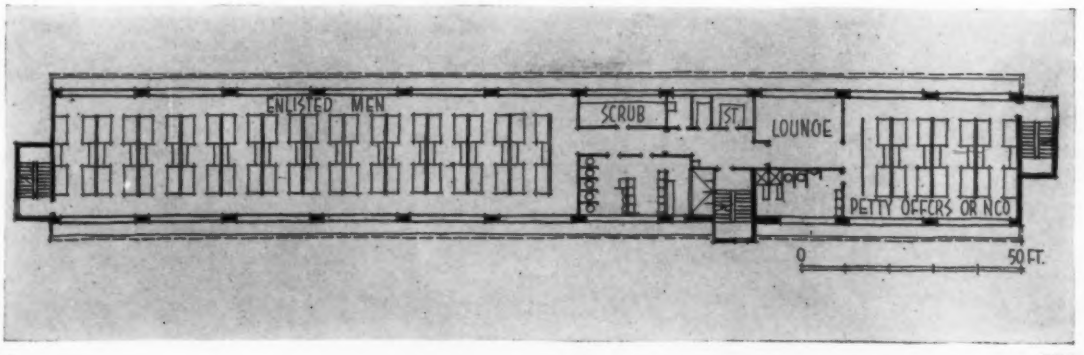


Mills & Petticord, Architects

Two-story mobilization type barracks (above, below)



Three-story permanent type barracks, typical floor (below)

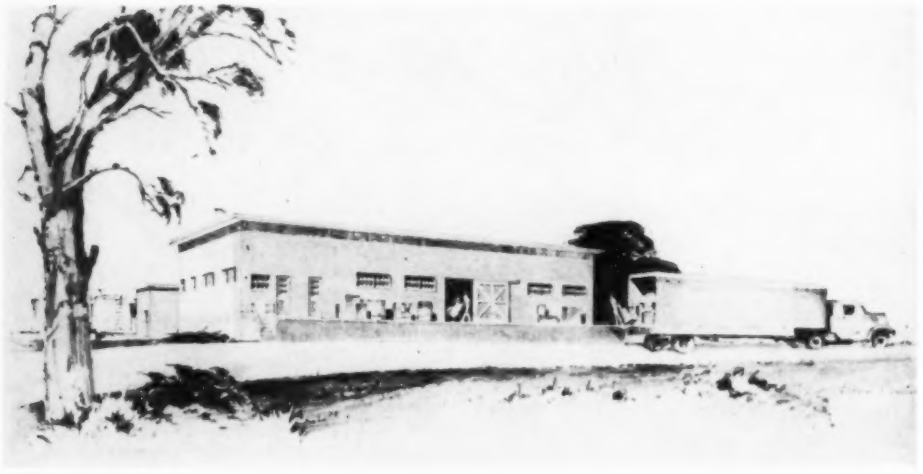


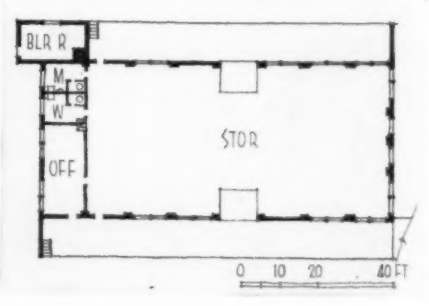
ONE-STORY GENERAL WAREHOUSES

THE GREAT QUANTITIES OF MATERIALS, foods and goods necessary to maintain a military operation place warehouses as one of the most vital of the repetitive building types. To permit a systematized method of operation and easy interchange of equipment, BuDocks has set up criteria and definitive drawings containing basic principles and design information for site selection, design and construction of a permanent standard warehouse of one story. This type is illustrated in plan and section at the bottom of the page.

The scheme is based on a compartment unit which may be used in multiples of, say, three or five, to form a complete warehouse. Particular attention is paid to the fire resistance of the structure and the combustibility of the goods to be stored. Each of the compartment units is separated by fire walls and has a floor area of approximately 40,000 sq ft.

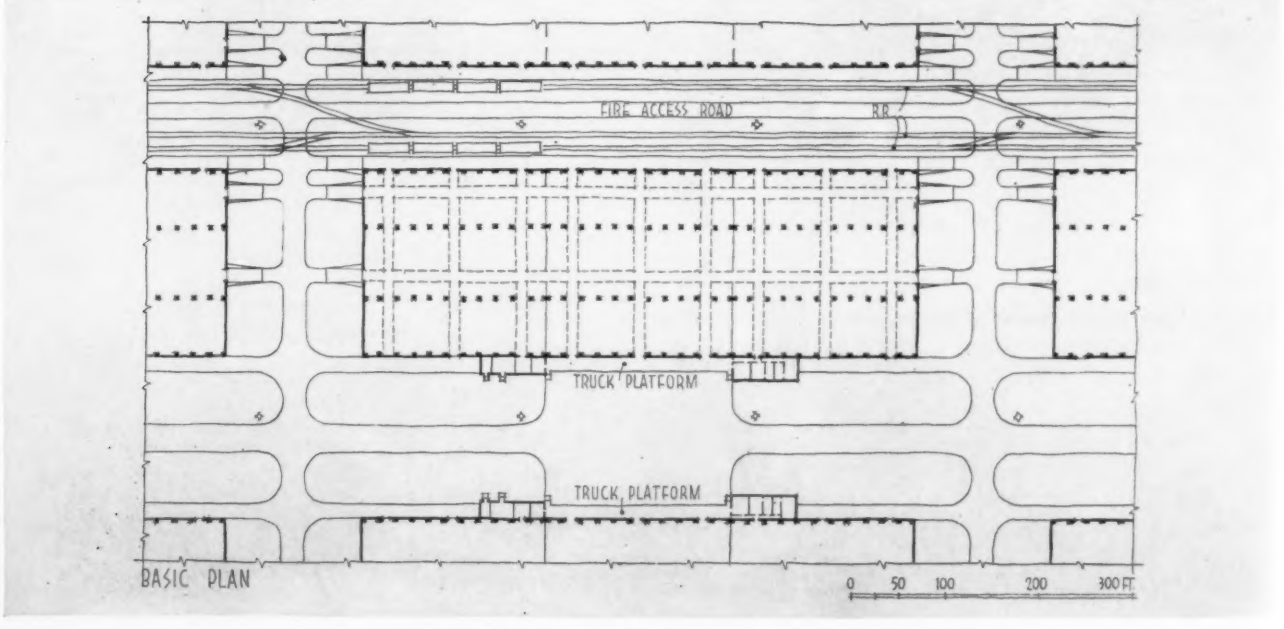
BuDocks also has a small, single compartment mobilization type warehouse scheme on hand for use in an emergency period. This design is shown directly below.



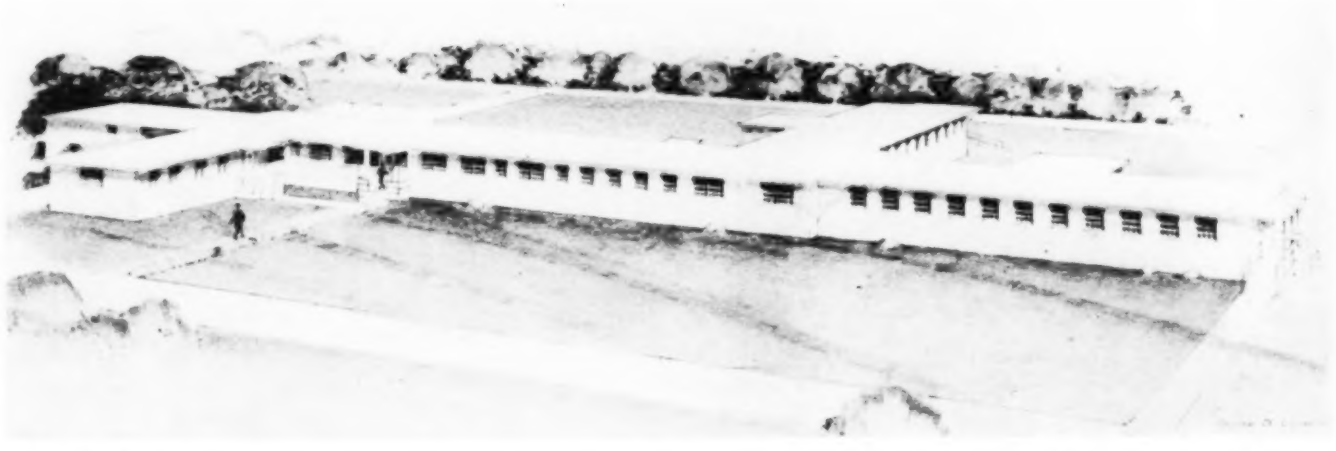


Mills & Petticord, Architects

Above: mobilization scheme for a small warehouse.
Below: three-compartment permanent warehouse

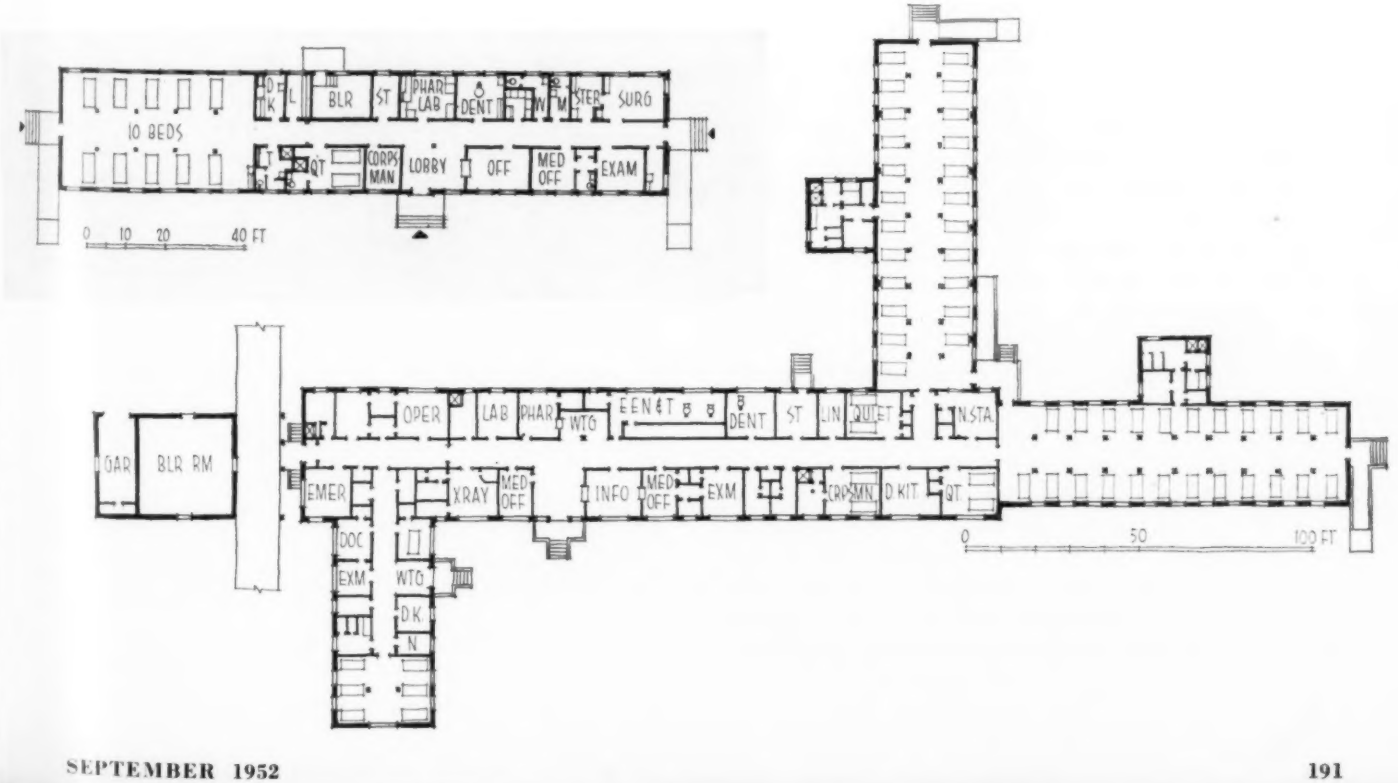


TO SUPPLEMENT THE PERMANENT HOSPITAL FACILITIES in periods of emergency, BuDocks has a series of mobilization schemes for various size dispensaries. All the designs use the standard open type wards, with grouped washroom facilities. As in the permanent hospitals, the wards are ranged around a central unit housing offices, labs, clinics and operating rooms. The main difference in the various mobilization schemes for dispensaries is simply one of size, rather than any major change in plan organization.

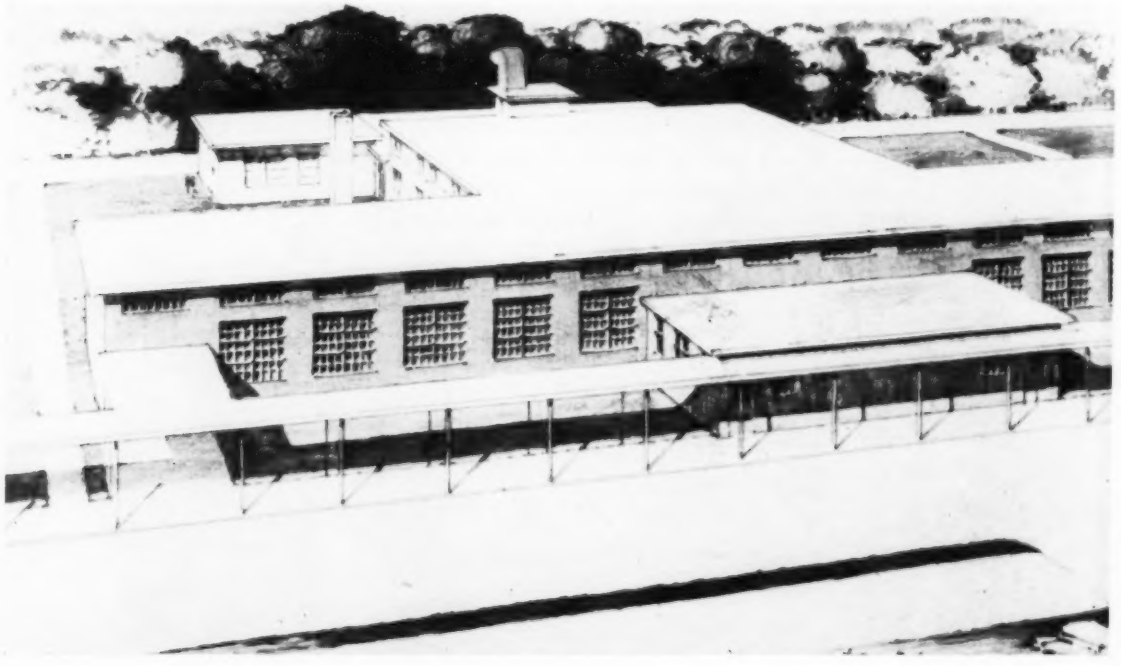


Mills & Petticord, Architects

A 50 bed dispensary is shown above and large plan below. The small plan in blue is a 10 bed unit



ENLISTED MEN'S SUBSISTENCE BUILDINGS

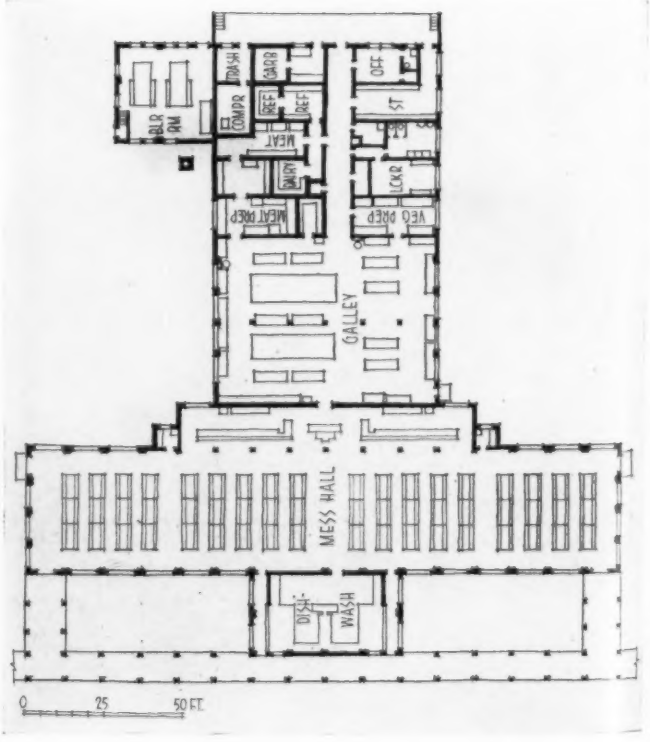


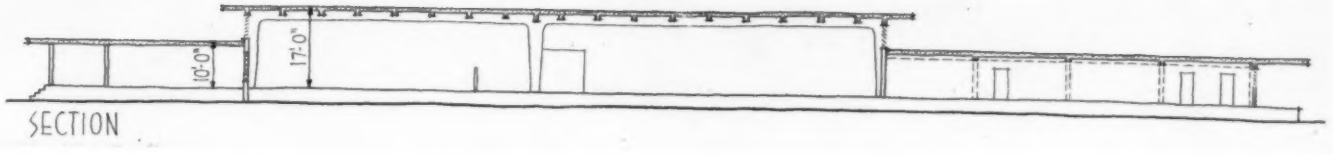
Mills & Petticord, Architects

MESS FACILITIES FOR NAVY and Marine enlisted personnel at Naval Shore Establishments have, in general, a standardized plan based on circulation patterns. The sizes and number of units at each base are directly dependent on the capacities of the barracks. For all bases except those of the Fleet Marine Force, one subsistence building is provided for each group of barracks having a total "normal capacity" up to 3300 men. The term "normal capacity" denotes the capacity of the barracks when single-bunked. "Emergency capacity" denotes capacity when double-bunked, or about 50 per cent more. Fleet Marine Force bases have one subsistence building for each barracks group with a "normal capacity" up to 1000 men.

Mess halls are designed for cafeteria service of 85 per cent of the "normal capacity" of the barracks in about an hour, and 85 per cent of the "emergency capacity" in about 1½ hours. These figures are based on the assumption that about 15 per cent will be absent for various reasons.

Galleys, however, are designed to serve the total "normal capacity," and have space for any additional equipment needed to serve the total "emergency capacity." Calculations are also based on time allowances of ten persons per minute passing through the serving line, 15 minutes per person for actual eating time. One cafeteria serving counter, one scullery for dishwashing and about 200 seats are provided for each 425 men to be served.





SECTION

Navy standards follow the same general pattern for all types of subsistence buildings. The plan and rendering at left show the mobilization scheme for a unit to serve 1000 men at "normal capacity," 1550 men at "emergency capacity." The section and plan on this page show a permanent tropical type unit with a normal capacity of 2000, an emergency capacity of 3000. Buildings for northern zones are similar to tropical except for amount and type of fenestration, different roof design. Storage space in the permanent type is based on a one-week supply for "normal capacity," five-day supply for emergency. Type of equipment used depends on fuel available

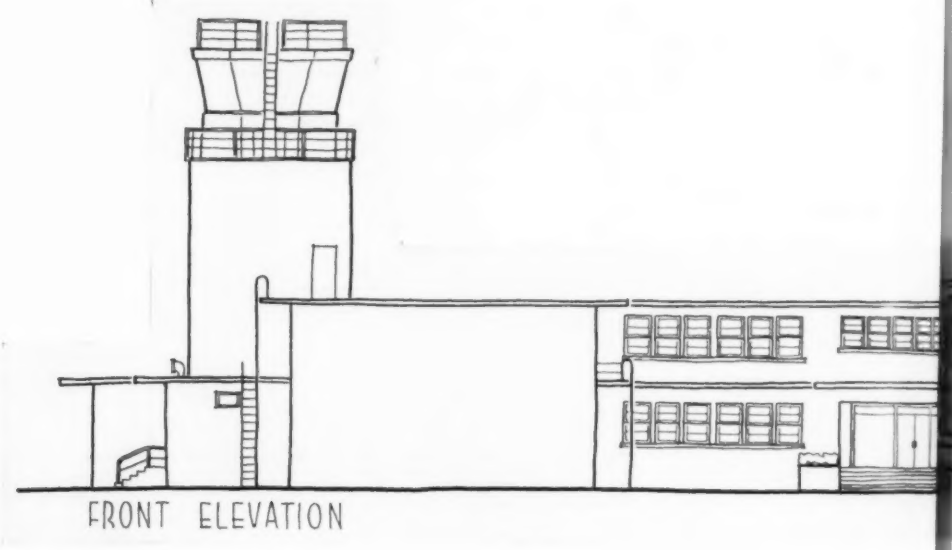
AIRFIELD CONTROL TOWER AND OPERATIONS BUILDINGS

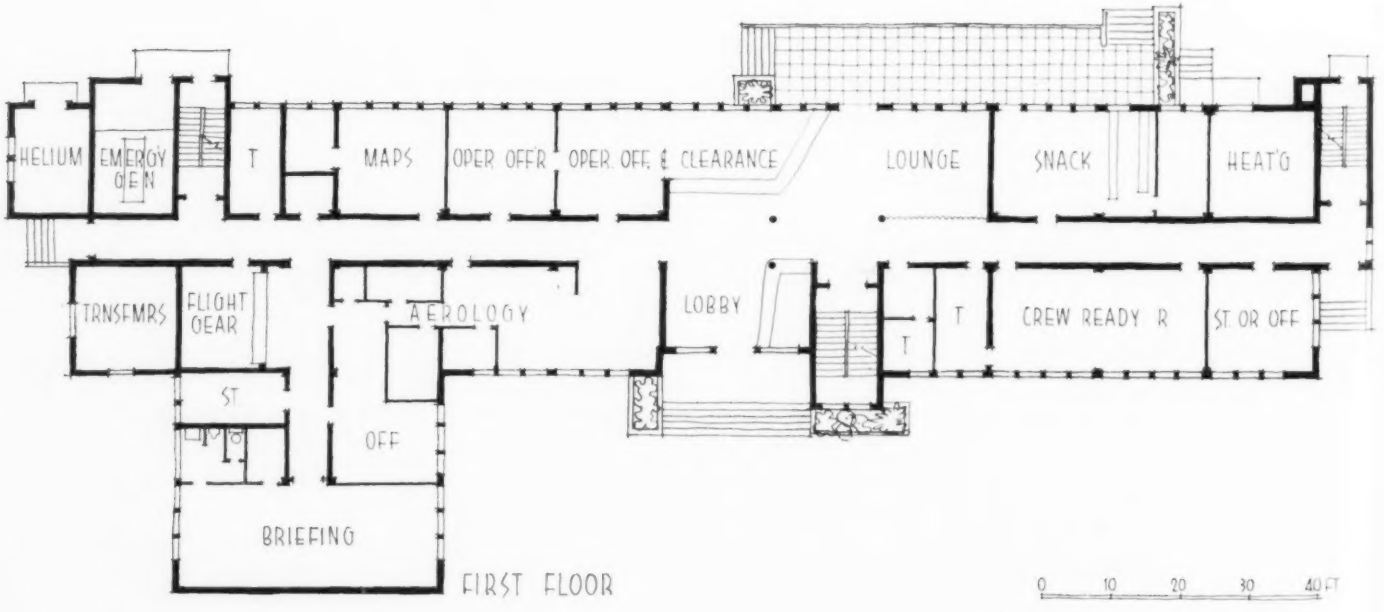
THE RAPID EXPANSION OF THE AIRFIELD construction program, discussed previously, has greatly increased the importance of a standardized "criteria" for control towers and operations buildings. The traffic control tower itself is the nerve center of an air station. Within it are centralized facilities for giving taxiing instructions, takeoff clearances, approvals to deviate from prescribed traffic patterns and many other kinds of information on traffic, airfield conditions and weather.

The tower must be higher than any near-by structure that could limit or obstruct the operator's vision. Where the terrain is level, a height of 40 ft from the ground to the floor of the control room is considered the minimum.

The control tower is often constructed as part of the operations building for the sake of convenience to offices and facilities for aerology, operations, communications and Ground Control Intercept. In some instances, however, a separate tower is desirable.

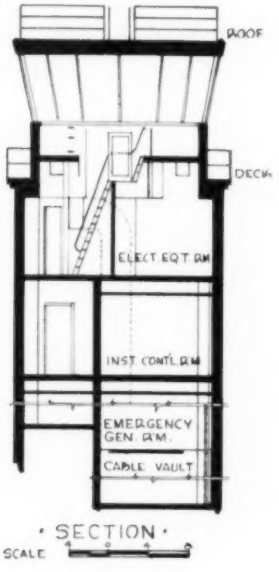
NAVY BUILDINGS

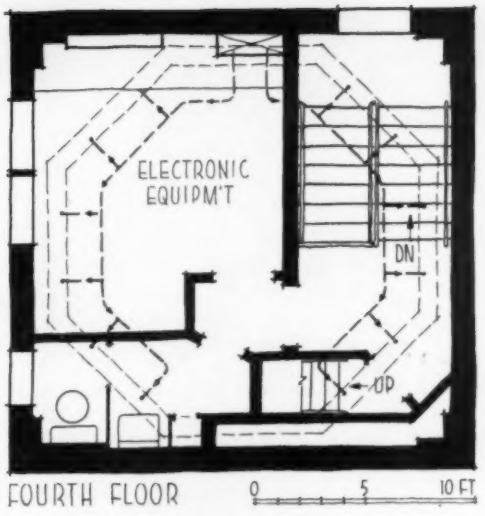


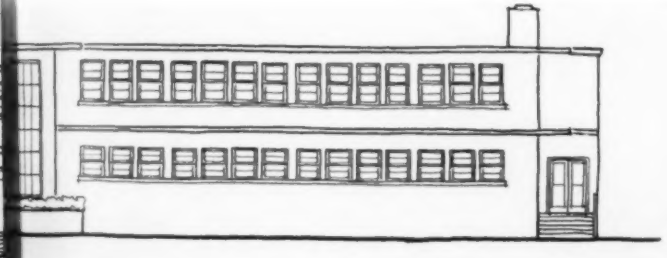


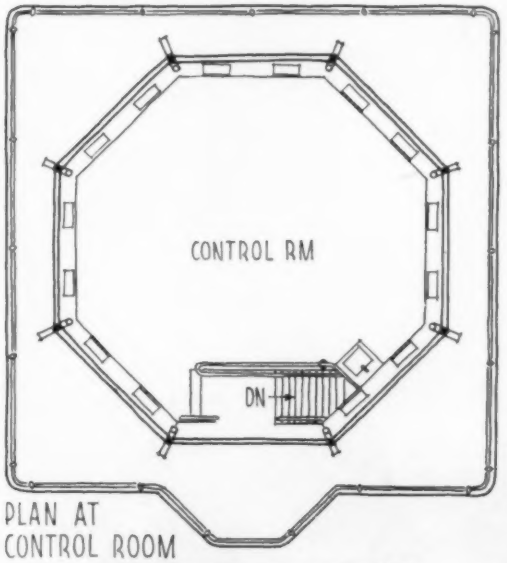
The sketch at top shows an elevation of a combined control tower and operations building as proposed by Navy Definitive Plans

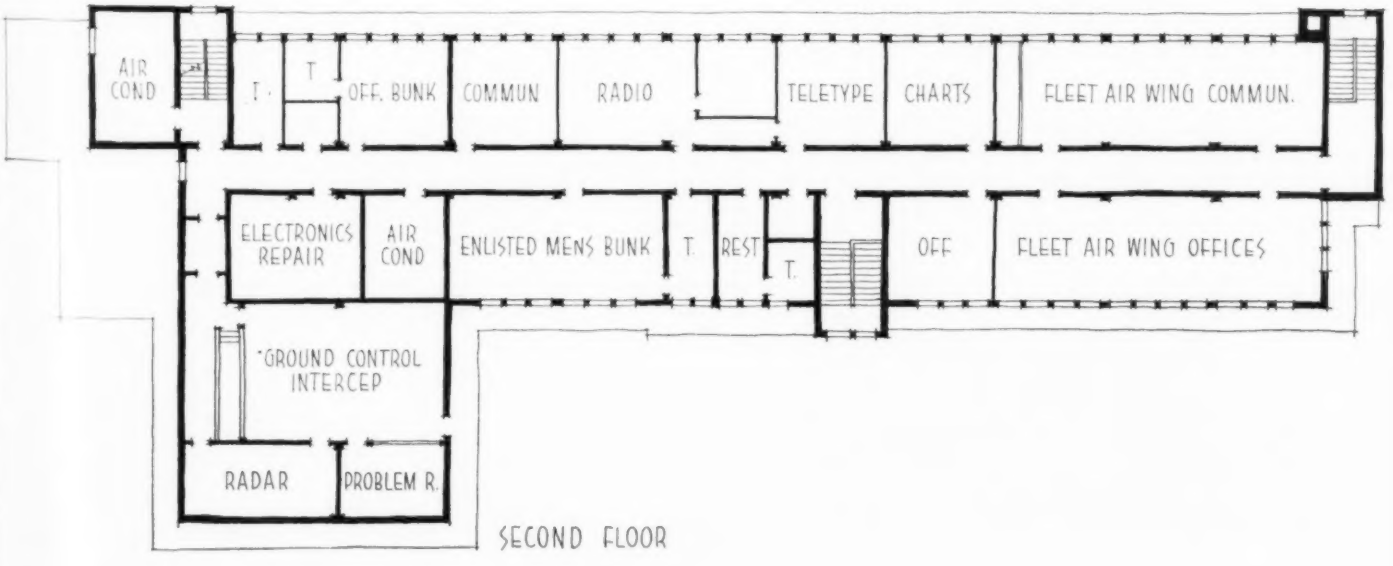
Below: section through control tower which fits above emergency generator room on first floor plan. The two plans at right are typical floors in tower: electrical equipment room, control room









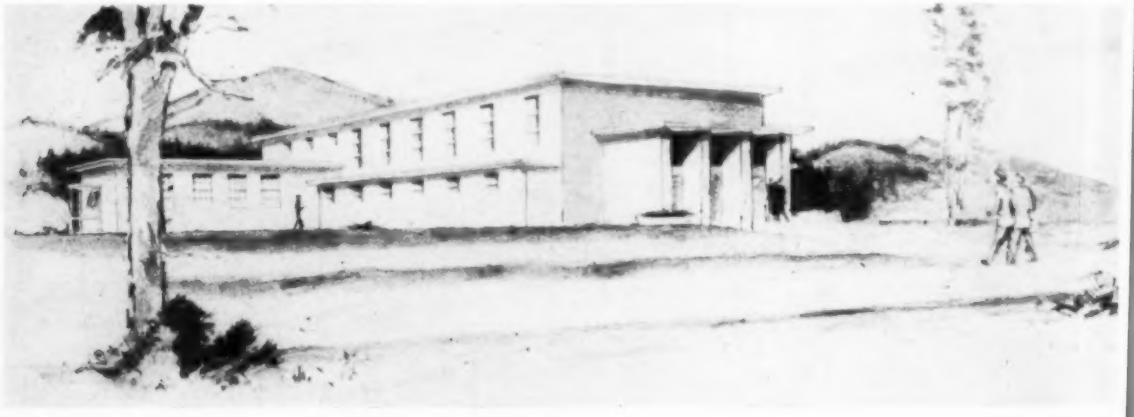


The floor plans at bottom of page show suggested layout for a permanent operations building, with rooms for crews, offices, repairs

CHAPELS

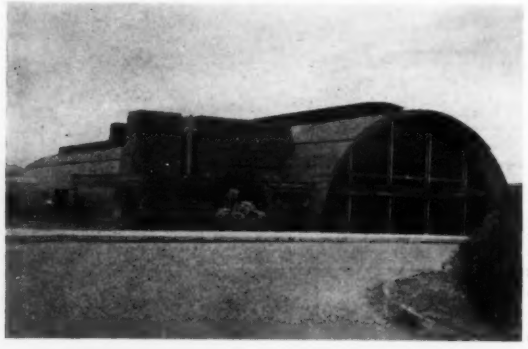
BuDocks has built many chapels with fresh designs on Naval bases scattered over the globe. At present, the drive for economy has the Bureau Staff constantly seeking new ways to provide adequate buildings for lower cost.

In general, standardization plays a lesser role, except perhaps in plan and size, for permanent chapels. In case of a rapid build-up of bases, however, a direct, simple mobilization scheme has been prepared to take care of personnel needs. The scheme is, of course, non-sectarian and makes provision for use by all faiths and denominations. The main chapel has a conventional plan, 594 seats. It is flanked by wings housing an 84-seat morning chapel and a 108-seat Sunday school. These wings could be added or deleted as budget, time and other conditions warranted.

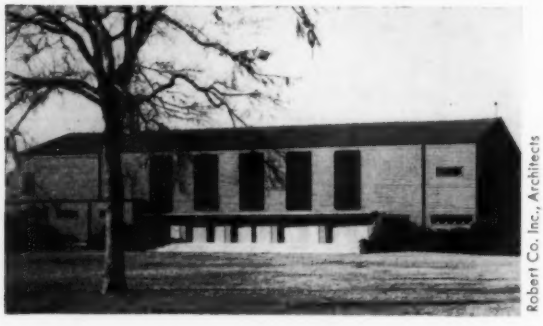


Mills & Petticord, Architects

The mobilization chapel scheme is shown in the rendering and plan at right

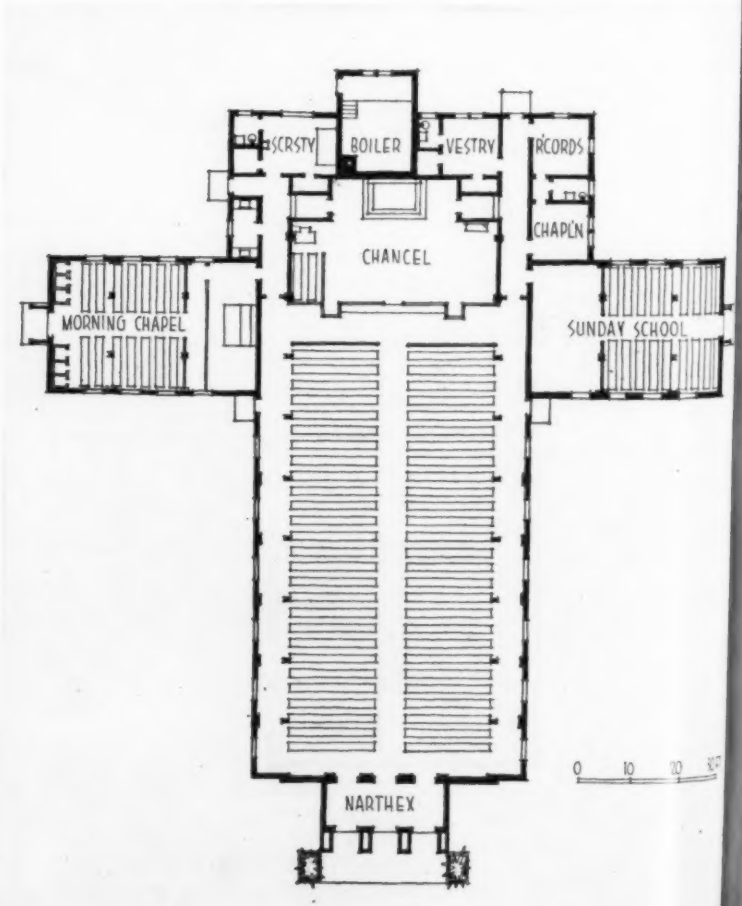


Bruce Goff, Architect



Robert Co. Inc., Architects

Above: two permanent chapels—top, chapel at Shoemaker, Calif. Bottom, Catholic chapel, Jacksonville, Fla.



PLANTING THE SITE

By Maud Sargent, Landscape Architect

This article deals with the more functional aspects of landscape architecture and was preceded by articles on site engineering including land drainage and building foundations. Here the author tells (1) which are the most desirable trees, shrubs and ground cover, (2) how they can be integrated with buildings and other construction, and (3) how to prepare the soil for them

PLANTING THE SITE should be regarded as an integral part of any project involving additions or alterations to the surface of the earth. It is not just a "dressing up" operation, but should be planned right along with the building.

There are practical as well as esthetic reasons for planting the site, although esthetic reasons are among the most practical.

PURPOSES OF PLANTING

Design Considerations

The design is three dimensional, and the main structure and the strongest elements of the design are trees. Shrubs form the fill-in material and may be used as color accents and emphasis. Lawn or ground cover forms the background.

Planting may be used to accent design; to build up emphasis to more important parts of the project; to bring out certain aspects and minimize others. This may be done by the use of various foliage and flower effects, and even fruit and colored bark in the winter season.

Accents and increased perspective can be obtained by the use of various foliage textures — the coarse catalpa (Catalpa speciosa) or Empress tree (Paulownia tomentosa) minimizing distance, and the fine textured honey locust (Gleditsia triacanthos) or tamarack (Larix laricina) giving an impression of greater distance. They can be used with carefully graded intermediate textures to create perspective. Color is also used to create conscious effects, changing with each season. See "Elements Used in Planting Design."

The building should look like it belongs to the site, and the site should blend with its surroundings. A landscape project cannot be enclosed in a frame; it cannot be seen in its entirety except in relation to its surroundings. Since the frame cannot be selected and the landscape beyond the project bounds cannot be controlled, the project itself must blend with its surroundings.

Not only must the exterior of the project be considered, but the view from the inside looking out is also important. Too often a large window looks out on a dismal aspect and the "landscaping" consists of an assortment of evergreen shrubs massed around the base of the building giving the impression that it is necessary to conceal the juncture of building and ground.

Practical Considerations

Conservation

1. Erosion Control. Since construction is not always completed at the proper time for planting, some quick growing cover crop should be planted to prevent erosion. Ground covers, grasses and low plants form good protection against erosion, and so do trees and shrubs, as they shade the ground and help to maintain a constant moisture content.

2. Air Conditioning. Vegetation is a natural agent for humidifying and purifying the air. On small projects this factor is negligible, in metropolitan planning it should be considered.

3. Maintenance of the Water Table. Planting is usually done around reservoirs to maintain the water table and protect the purity of the water.

Windbreak

1. The drifting of snow and the formation of ice may be discouraged by windbreaks.

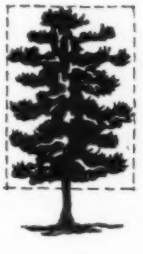
2. Comfort and protection of buildings and plants may be improved by windbreaks. Shelterbelts in the great plains areas are a necessity. Windbreaks may consist of a single row of trees or shrubs or several rows of strategically located clumps of trees or shrubs. Deciduous and evergreen material can both

ELEMENTS USED IN PLANTING DESIGN

SHADE TREES

use: strong element in three dimensional design; shade; screen; windbreak.

EVERGREEN



oblong

white pine

conical

hemlock, fir

ELEMENTS USED IN PLANTING DESIGN

SHADE TREES

EVERGREEN
continued

columnar

red cedar

COLOR

dark	pitch pine
lighter	white pine
bluish	blue spruce

DECIDUOUS

summer effect

round

maple, ash, linden

oblong

honey locust, tulip tree

be used, but, of course, evergreen plants give more year round protection.

Sturdy plants must be used such as red or white pine or hemlock among the evergreen trees; hornbeam beeches or pin oak among the deciduous trees; columnar junipers and arborvitae among the evergreen shrubs; and privet species, buckthorn and blackhaw among the deciduous shrubs.

Shade

Planting may be used very effectively to assist in keeping a building cool; it will make an appreciable difference in the temperature. A deciduous tree, of course, will not cast much shadow in the winter when the warmth of sun is desirable.

Screen

1. Undesirable views may be screened out by either a hedge or clumps of plants. Typical hedge plants are yew (evergreen) and privet (deciduous), but there are many other possibilities.
2. Service areas are usually screened from other parts of the project.
3. Noise and dust can be screened out to a considerable extent by planting (an important consideration in designing playgrounds).
4. Glare from lights can be eliminated in some places. In a divided lane highway or parkway, shrub planting in the center strip will cut down the glare of headlights.
5. Focus on certain points can be created by screening out distracting views.

Taconic State Park Comm. John Gass photo

Natural landscaping helps separate opposing lanes of traffic on this parkway

Implement flow of traffic

1. Main roads or drives may be emphazied by tree planting. Curves in a road may be more clearly distinguishable from greater distance by planting trees on the outside of curves. Intersections and inside of curves must have a clear view.
2. Effective barriers can be made by planting shrubs. Dense growing or thorny ones will discourage unwanted short cuts by pedestrians.
3. "Slow" signs on a highway may be emphasized by trees which converge at that point.

SPECIAL PROBLEMS IN PLANTING DESIGN

Highway and Parkway Planting

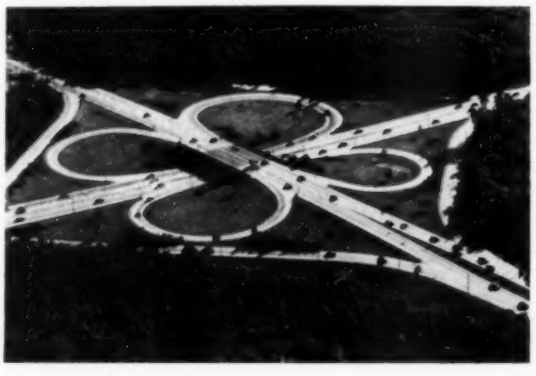
Erosion prevention. Modern highways and parkways frequently have steep

Ezra Stoller Photo

These trees, when grown, will provide welcome shade for the terrace and house. Albert Kennerly, Architect

banks of cut or fill to eliminate steep grades and sharp curves. Even when these banks are made at the angle of repose of the specific soil (a three to one slope generally) and if the underdrainage has been provided (See ARCHITECTURAL RECORD, July 1952, p. 155) there will be erosion unless the banks are planted with some sort of ground cover. Grass is sometimes satisfactory, only it requires mowing. Honeysuckle and Memorial Rose are two good ground covers for banks that require little maintenance.

Disease and pest free plants are required to keep maintenance budgets low. Long lived trees for permanent beauty are preferable, but since they are usually slower growing than the others, they are frequently interplanted with fast growing trees that can be removed later. Oaks, for example, are among the more permanent trees, and ash and poplar are among the quick growing. Trees native to the area are usually preferable.



Standard Oil Co. (N. J.)

Strategically placed trees form visual barriers between the cloverleaf and the roads tangent to it

Street Trees

The importance of street tree planting in cities is becoming more universally recognized. Curiously enough the larger cities seem to place more emphasis on street trees than the smaller ones which, although they may have more trees proportionally, are not always so assiduous in caring for them or in replacing them as it becomes necessary.

Shade. Trees reduce the heat reflected from paving and buildings, and they are just as useful in commercial as residential areas. The Chestnut Hill Shopping Center Development Group in Philadelphia is now planting 64 Ginkgo trees in front of stores along Germantown Avenue.

Street noises. Trees will reduce noises. This has an appreciable effect on upper floors.

Specifications

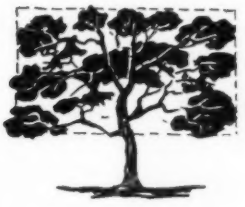
1. Plants must be sturdy, long lived, free from diseases and pests. They must not have surface growing roots that will eventually lift up pavement (maple trees, for example) and they must not have roots that will get into sewers and clog them up (poplars and willows). Where planted in, or overhanging, pavement areas they must not have flowers or fruit that will drop.

2. They should be planted 40 to 75 ft apart, at least 25 ft from an intersection and 10 ft from a fire hydrant, and at least 3 ft from the curb.

If they are planted in the sidewalk area they should have a rectangle of open earth around the trunk at least 6 by 7 ft. This may be covered by granite or concrete blocks laid with open joints so that the rain water can penetrate to the roots. Sometimes an iron grating is placed over the area to allow people to walk on it without packing the earth so hard that it becomes impervious to water.

Among the most satisfactory street trees are planes, red oaks, Ginkgos and silver lindens. Norway maples are one of the most commonly used street trees, but they have an uninteresting shape and all maples have surface-growing roots.

DECIDUOUS (Summer)
continued



long
oblong

white oak

columnar

lombardy poplar

vase
shaped

American Elm

DECIDUOUS STRUCTURE

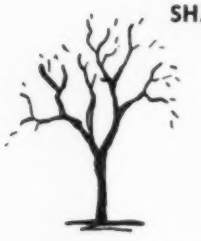
winter effect

dense twiggy

linden, pin oak

ELEMENTS USED IN PLANTING DESIGN

SHADE TREES (winter) *continued*



open branched

white oak, American plane

ascending branches

maple, ash

descending branches

pin oak, pepperidge

horizontal branches

white oak

DECIDUOUS	COLOR—SUMMER
light green	honey locust, larch
dark green	Norway maple
purplish (to be used sparingly)	purple beech
silvery	poplar (aspen)
	COLOR—FALL
red	maple, scarlet oak, sweet gum
yellow	tulip tree
brown	white oak
	TEXTURE—SUMMER
fine	honey locust, larch
coarse	catalpa, Empress tree

Parking Areas

Trees around the edge of the lot and in between rows of cars will be a welcome addition to any parking lot. Some protection is required to keep cars from bumping them; a raised curb is adequate if the trunk of the tree is 3 ft from the curb. The same considerations as for street trees must be used in selecting material and planting for parking areas.

Foundation Planting

A mass of shrubs should not be planted all around the base of the building. Although it may be desirable in the design to have a long continuous line, in general it is better to have groups of plants in the foundation planting and have spaces where the junction of building and ground is clearly visible so that the building appears to set solidly on the ground.

The size of the building and the site must be considered in the selection of plant material because the ultimate height and spread of the plants must be commensurate with the size of building and site. It is better to select mature plants than to crowd in too many young ones that may eventually grow too tall. A three-foot hemlock may look just right under the window when it is planted, but it is a forest tree and in five years it will cover the window entirely. Evergreen and deciduous material are both more effective when they are used together than when either one is used alone.

Playgrounds

An open area for active play is not the only requisite. Shaded areas for rest and relaxation are also part of the recreation needs. A planting barrier of trees and shrubs will reduce noise and make the playground more of an asset to the adjacent property owners.

Trees may also separate use areas in the playground and make an attractive design. Sturdy, long lived trees and shrubs should be used and ones without edible fruit on them.

Parks

In general, park plant material should be as for streets and playgrounds except that flowering and fruiting trees are desirable provided they are hardy and pest free and planted so as not to drop fruit on the pavement. Plants should be selected with regard to the park's size.

Private Homes

The primary consideration in planting design for private houses are:

1. Character of the surroundings.
2. Character of the site.
3. Character of the house.
4. Personal tastes and living habits of the occupants.
5. The amount of time the occupants are willing to spend on upkeep.

Sigurd Fischer photo

Apartment house planting requires simplicity of design and a sense of scale

6. Screening from neighbors may be desirable; or the more open feeling of a park, in which the open spaces of many neighbors merge, may be preferred.
7. Service area to be screened.
8. Human scale and livability.

Housing Projects

The neighborhood concept can be emphasized by planting design of the project as a whole. The whole is greater than the sum of its parts. Personal tastes of individuals generally are subordinated to give character to the whole project.

Apartment Houses

With the recent trend toward more land for the building, the planting becomes more important. Simplicity of design is essential.

The scale of the building must be considered in relation to the plants. Planting suitable for a low, one-story house would hardly be appropriate for a multistory dwelling.

Planting may be used to direct the flow of traffic. Fences may be concealed or the hard lines softened by planting shrubs and vines.

Industrial Sites

The modern trend is toward larger

industrial sites and lower percentage of land coverage. This is partly due to the recognized need for off-street parking for employees and partly to a growing awareness that an industrial plant can be an attractive part of the community and can promote good public relations. Space around an industrial plant, if landscaped, can reduce noise considerably. It is an asset to have an attractive area where employees may eat and relax during the lunch hour.

FORMAL AND INFORMAL PLANTING DESIGN

The character of the project and its surroundings will determine whether it will be formal or informal. By formal design is meant the use of straight lines and geometrical patterns rather than axial symmetry.

In general the closer to the building or structure, the more formal will be the planting. The transition from the purely man-made structure to the purely natural landscape can be made by the planting design. Each designer will do it in a different way. The ultimate test is whether it looks as though it belonged there.

Sigurd Fischer photo

Trees are desirable in commercial as well as residential areas, cutting off heat radiated from paving and buildings. Fresh Meadows, N. Y. City. Voorhees, Walker, Foley and Smith

PREPARATION OF THE SITE FOR PLANTING

Fine grading

The ground first must be levelled off at 8 to 12 in. below the finished grade and smoothed, raked free of stones, roots, etc.

Topsoil

The topsoil is then spread and leveled off 2 in. above the finished grade to allow for compaction. The depth of topsoil occurring naturally varies considerably with the site. For planting operations 8 to 12 in. of topsoil are required for lawn or ground cover areas and tree pits and shrub beds are backfilled with topsoil.

Drainage

Usually the surface drainage will take care of the moisture in the soil if the minimum slope of a lawn area is 0.5 per cent. There may be some unusual conditions where it may be necessary to lay a tile drain field.

Tree pits

Tree pits should be at least 18 in. greater than the diameter of the roots of the tree and at least 1 ft deeper than the roots. The bottom of the tree pit should be scarified to a depth of several inches to help the roots penetrate the subsoil. The turf removed from the top of the tree pit should be turned upside down in the bottom of the hole. The tree is then set at the same level as it was growing previously and the hole backfilled with topsoil.

Before the hole is completely filled, the earth must be settled in place with water. A saucer of earth slightly larger than the tree pit is made around the tree to hold the water. If the tree is planted on a slope the ground must be graded

SMALL FLOWERING TREES

use: accent and for variations in height.

upright

crabapple

horizontal

dogwood

COLOR

	Flower
white	dogwood, sourwood
pink	flowering crab
red	carmine crab
yellow	golden chain tree

Foliage and fruit—autumn

red foliage	dogwood
red fruit	dogwood, Sargent crab
yellow fruit	showy crabapple

SHRUBS

use: for fill-in design; accent; screen; erosion prevention; windbreak.

EVERGREEN

rounded

mountain laurel

ELEMENTS USED IN PLANTING DESIGN

SHRUBS *continued*

columnar

upright yew

procumbent

Waukegan juniper

EVERGREEN COLOR

Foliage

dark green	holly
lighter green	andromeda
grayish	juniper species

Flower

white	andromeda
pink	mountain laurel
red	rhododendron sp.

Fruit

red	holly, yew
black	inkberry

TEXTURE

coarse	rhododendron
fine	juniper

DECIDUOUS

vase shaped

honeysuckle

rounded

spirea

around the tree to catch and hold water. This saucer should be left for a year before leveling off to grade.

Shrub beds

Shrubs are preferably planted in groups rather than as individual specimens. The whole shrub bed is excavated to a depth of 2 ft, the shrubs are set in place at the same level as they were growing before and the area is backfilled with topsoil, and settled with water.

Lawn areas

Ground limestone should be applied in the amount of 4000 lb per acre and commercial fertilizer (2–16–8). Lime should be applied at least a week before the fertilizer.

If seeding is done by hand it must be done in two directions to secure an even stand.

Grass must be pretty well grown before it can withstand the hot sun. Lawn seed is usually made up of mixtures of several kinds of grass seed including Kentucky Blue Grass, Illahee Creeping Red Fescue, Rhode Island or Colonial Bent, Red Top and domestic rye grass. The rye grass, being annual, will germinate more quickly and give cover while the permanent grasses are maturing more slowly. Wild white clover is a good addition to a lawn. The amount of seeding is usually about 200 lb per acre.

Finishing Up

Staking the trees

All newly planted trees should be staked immediately after planting. Street trees are usually staked by two white cedar posts with bark attached, about 2½ in. in diameter and 8 ft long sharpened at one end and driven at least 3 ft in the ground. The tree is guyed to these posts by No. 12 guage wire and the tree trunk is protected by short lengths of rubber hose. This kind of staking is the best for trees which are in a location where people might walk into the wires without seeing them. Otherwise it is best to stake the trees with three guys attached to 2 by 4's sharpened at one end and notched at the other and driven almost flush with the ground.

Pruning

After planting, most trees and shrubs should be pruned back so that the tops of the plants will not lose so much moisture until the roots are established. Trees may be pruned back about one third of the total branching system. All pruning cuts must be clean cuts and branches must be cut back to the next branch. Shrubs should also be cut back in the same manner and about the same amount.

Lighting combined with trees and shrubs comprise traffic islands at Bullock's, Pasadena, Calif. Welton Becket and Assoc., Architects and Engineers

Mulching shrubs

Newly planted trees and shrubs should be mulched by having an inch or two of humus spread over the tree pit or shrub bed. For ericacious plants, that is rhododendron, mountain laurel, highbush blueberry, etc., the mulch should be of oak leaf mold free of sticks and stones.

Feeding

1. Lime. Most plants thrive best in a fairly neutral soil but the decomposition of organic matter has a tendency to

New York City Park Dept.

Playground trees help to screen out noise and dust—can also separate use areas

build up the acidity of the soil and this must be counteracted by the addition of ground limestone. Different plants have different tolerances for acidity and should be planted in groups accordingly. For example, lilacs grow best in quite an alkaline soil and should not normally be associated with ericacious plants such as highbush blueberry which likes a pretty acid soil.

Some soils are more acid than others because of the nature of the particles which make up the mineral structure of the soil, or the basic rock strata which underlie it. In the eastern part of the United States, the soil has a tendency to become acid, and addition of lime at intervals is usually required.

In some parts of the country, however, the soil is so alkaline as to require neutralization before plants will grow. Lime, in addition to being one of the plant nutrients, has an effect on the texture of the soil. Strongly acid soil will pack down and become hard and almost impervious to water.

There are new chemicals on the market that help to condition the soil for favorable plant growth. They do not supply any plant nutrients, however, but make the soil more favorable for plant growth.

2. Manure (organic fertilizer). The advantage of manure over commercial fertilizers is that it supplies organic matter to the soil which helps to maintain the water content of the soil as well as to supply nutrients. The manure must be well rotted, more than nine months and less than two years old. Fresh manure is too strong and will injure the roots of plants with which it comes in contact. Manure which is too old has lost much of the nutrient chemicals.

Green manure is a cover crop of alfalfa or rye grass which is turned into the soil while it is still green. This adds humus to the soil and nitrogen as the green plant disintegrates in the soil.

3. Commercial fertilizer. The main nutrient elements for plants are nitrogen, phosphorus and potash. In commercial fertilizers these elements are listed in that order and indicating amounts of each.

REQUIREMENTS FOR A GOOD PLANTING JOB

Material must be selected which is free from diseases, pests, abrasions and broken or poorly pruned branches. Some specimen trees and shrubs will have to be selected for their specific growing habits and shapes and will have to be oriented at the site for the best appearance.

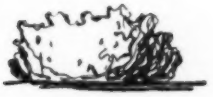
Careful interpretation of plans. Sometimes in actual planting operation, in order to carry out the spirit of the design, it is necessary to deviate somewhat from the plans. For example, if it is desired to screen out a certain view it may be found to be more effective on the actual site to shift some of the plants one way or another.

Adequate maintenance is a very important factor in the appearance of a planting job in subsequent years. A planting job will rarely look its best immediately after the initial planting job is finished, and unless it is properly maintained it may never attain its maximum potentialities.

Hedrich-Blessing Studio

Landscaping furnishes pleasant atmosphere for grounds outside cafeteria at an industrial lab. Holabird & Root & Burgee

SHRUBS—DECIDUOUS
continued



broad spreading
dwarf Japanese quince

columnar
enkiathus

STRUCTURE

open	Siebold viburnum
dense twiggy	burning bush
thorny	barberries

COLOR

Flower

white	Japanese snowball
pink	deutzia
red	Japanese quince
yellow	hugonis rose, forsythia
blue	bluebeard

Foliage—summer

light green	hugonis rose
dark green	black haw
silvery	Russian olive
red	burning bush
yellow	witch hazel

Fruit

red	rugosa rose, honeysuckle
yellow	Japanese quince
blue	highbush blueberry
white	snowberry
silvery	bayberry

Twigs

red	red osier
yellow	yellow twig dogwood

VINES AND GROUND COVER
use: carpet the ground; erosion prevention; screen or soften building or walls.

CARPETING MATERIALS

for shade	bugle plant, ivy
for sun	thyme, moss pink

LOW SHRUBBY GROUND COVER

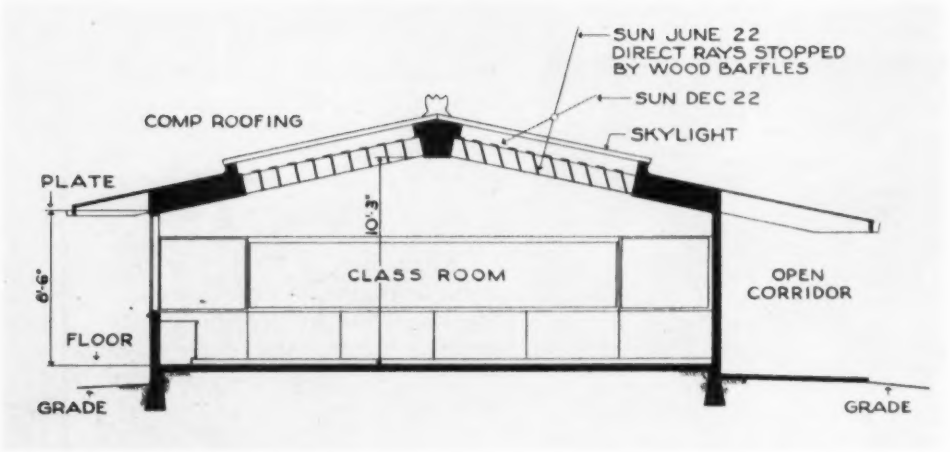
for shade	yellow root
for sun	pachistima

GROUND COVER FOR DISTANCE

sumac species

VINES

clinging vines	ivy, trumpet vine
twisting vines (need support)	wisteria
trailing vines (cover slopes or low walls)	memorial rose



Double skylight eliminates necessity for high windows on side walls, also provides ventilation, solar heat

LOUVERED SKYLIGHT, VENTILATOR COMBINED

C. A. Caulkins Jr. and Associates, Architects, San Francisco and Santa Rosa, Calif.

QUITE A NUMBER of daylighting systems for schools have originated on the West Coast — encouraged to a great extent by the favorable climate. The new idea in skylights shown here, already in use in 17 schools and planned for several more, combines a louvered skylight with an adjustable ceiling ventilator; and curtains can be pulled over the skylight for audio-visual aids.

The skylight covers approximately 60 per cent of the ceiling, and the ventilator runs the full length of the classroom.

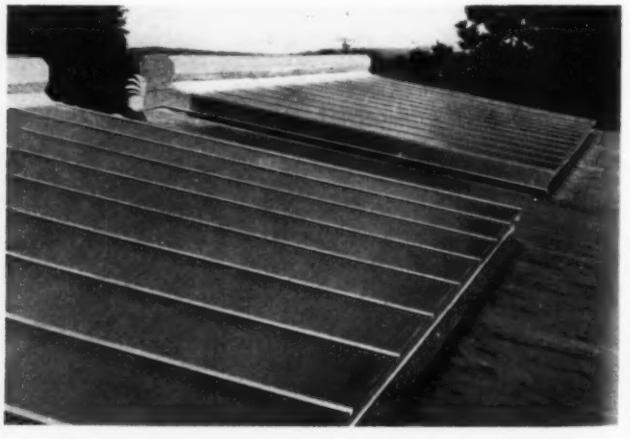
Light, Heat, Ventilation

A specially designed set of inverted, "L"-shaped louvers hang below the skylight which allow daylight to enter the room, but shut out the direct rays of the sun year 'round.

Problems of heating, cooling, ventilation, and audio-visual education are all involved in this skylight design.

A 10-in. space is provided between the heat-absorbing glass of the skylight and the louvers, so when the weather is warm, the heated air under the glass is sucked out through the ceiling ventilator by stack action; this creates a circulation of air throughout the classroom.

"L"-shaped louvers cut out direct rays of sun at all times, but still permit lots of daylight to get through. They can be darkened by means of curtains when audio-visual aids are being used



Adjustable, ceiling ventilator runs the length of the classroom. It pulls out the hot air under the skylight, induces room circulation, and can be closed as desired during the cooler weather

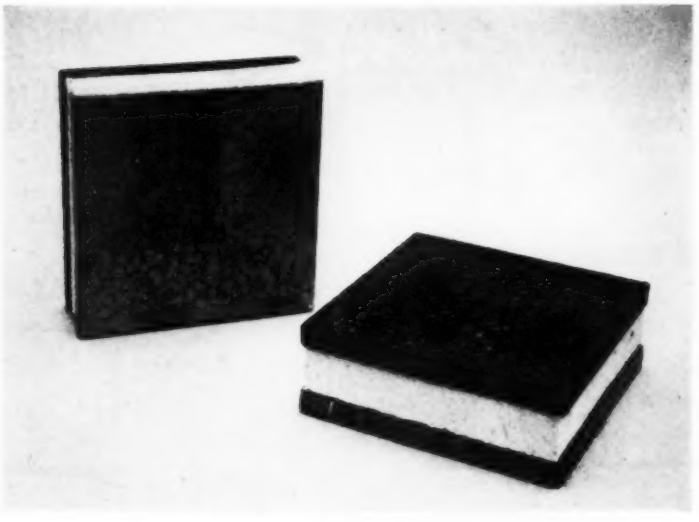
Metal-faced Panels for Curtain Wall Construction

With the increasing interest today in the use of prefabricated panels for curtain wall construction, many manufacturers have developed panels employing porcelain enamel and other facings in conjunction with a variety of core materials. Three of these are reviewed here:

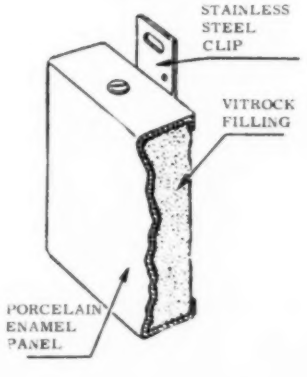
• *Davidson* "Vitrock" panels are manufactured by a process in which a gypsum base is bonded to the porcelain enamel skin after enameling has been completed. This process is reported to successfully eliminate objectionable waviness and distortion in the finished panel, and the base material is said to furnish good insulating and sound deadening qualities. While the panel skins are held on magnetic holding blocks, a quick-setting, shrink proof gypsum base material is applied. Anchors welded to the inner face of the skin secure the Vitrock core to form a one-piece integral flat-surfaced unit. The panels are installed with stainless steel fastening clips and do not require any further structural reinforcement than the same panels without the Vitrock base would require. Available in almost any color or texture desired. Davidson Enamel Products, Inc., 1102 Kibby St., Lima, Ohio.

• *Seaporclad* panels are laminations of porcelain enameled steel to thermal and noise insulating cores. Kaylo, Marinite 23, Celotex, Honeycomb paper and other insulating materials are used for the cores. If so desired, the panels can be supplied with inside surfaces of Galvaneal, aluminum and other metals. Sizes of the panels range up to 4 by 10 ft with cores of varying thickness. Varied textures in any color can be obtained, affording a wide flexibility in design. Light weight of the panels is reported to speed assembly and erection of curtain walls and to effect considerable savings in structural steel framework. Seaporcel Metals, Inc., 28-20 Borden Ave., Long Island City 1, N. Y.

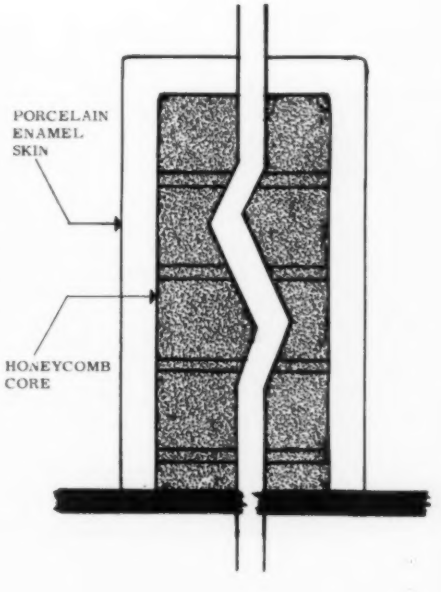
(*Continued on page 220*)



Seaporclad panels developed by Seaporcel have porcelain enamel outer face, thermal and noise insulating core. Sandwich type uses any of several metals for inner face

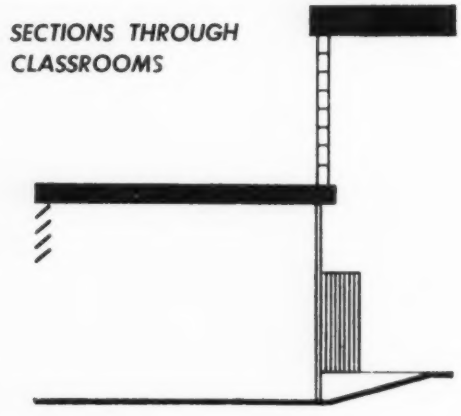


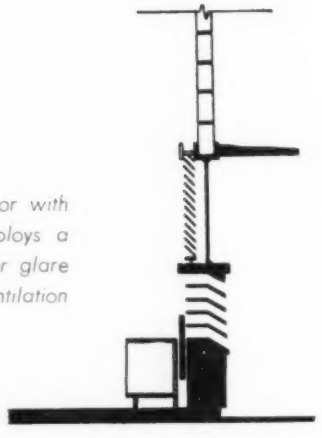
Davidson Vitrock panels, left, employ a gypsum base bonded to the porcelain enamel skin and secured with welded anchors



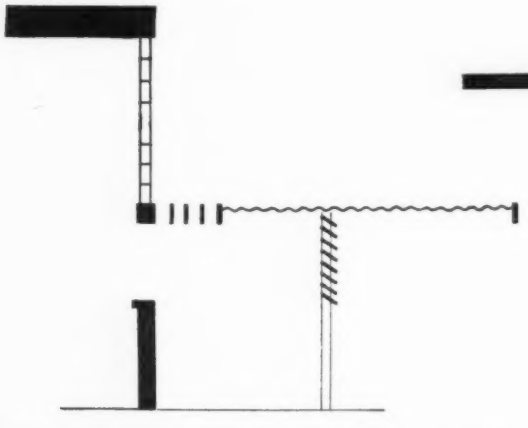
U. S. Plywood's Armorply panel, enlarged detail shown right, is available in a variety of facings and cores, is of sandwich-type construction

LITERATURE FOR THE OFFICE

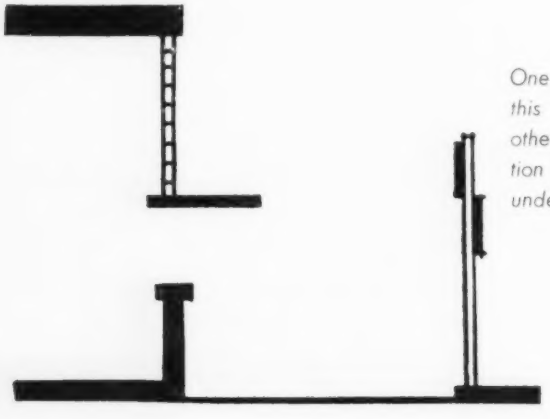




Glare control solution above uses outside corridor with louvers (left in drawing). Scheme at right employs a vision strip of fixed glass with fixed louvers for glare control, fixed louvers and sliding door for ventilation



Scheme above utilizes a large outside canopy in combination with louvers. Sky is shielded at all times, and the canopy also serves as a covered passageway



One of the simplest schemes, this uses screens of wood or other rigid materials. Ventilation is good, since air flows under the screen

Reducing Glare From Vision Strips

A Study of Vision Strips as Related to Glass Block Fenestration: A Project Conducted by the Texas Engineering Experiment Station in Cooperation with Kimble Glass Co. The second in a series, this report concerns a number of suggested solutions to daylight control problems encountered with vision strips employed in conjunction with glass block fenestration. The book suggests several projected schemes for providing proper vision, glare control and ventilation control where vision strips are used. These are classified in three categories of approach: through landscaping, through architecture and through manufactured products. In the first of these, methods of controlling glare and ventilation through the use of tree rows, rigid sky screens, play sheds between classroom wings, outside walls and vertical baffles are explored. Among the architectural schemes proposed are: outside corridors with louvers; projected glass block lighting panel; vision strip lowered to eye level of seated children; louvers suspended from a sun hood; a manufactured louver screen; screens of expanded metal; louvers in conjunction with a canopy; and fixed glass vision strip with separate venetian louvers for ventilation below and either fixed louvers or venetian blinds for sun control. The third approach is concerned with special transparent materials which might reduce sky brightness while permitting clear vision. In all, there are 14 schemes suggested, each analyzed in terms of both lighting and ventilation, and each illustrated with drawings, plans and sections. A section dealing with the results of brightness, visibility and color distortion tests of acrylic materials is included. 38 pp., illus. Kimble Glass Co., Subsidiary of Owens-Illinois Glass Co., Toledo 1, Ohio.*

Vertical Transportation

Westinghouse Vertical Transportation, 1952 Edition, B-4585. Booklet illustrates the manufacturer's line of elevators,

(*Continued on page 272*)

*** Other product information in Sweet's File, 1952.**

STRUCTURAL FORMS—5: Long Spans in Wood

By Seymour Howard, Architect, Instructor at Pratt Institute

GENERAL CONSIDERATIONS OF WOOD AS STRUCTURAL MATERIAL:

CHARACTERISTIC	CONSEQUENCE
Not homogeneous (orthotropic) (long cylindrical cells parallel to one axis)	Allowable stresses vary for pure tension & compression, tension & compression (extreme fiber) in bending, compression across grain, and also for shape of cross section ("Form factor"); depend on direction of stress with respect to direction of grain
Natural defects (cross-grain, spiral & diagonal; knots)	Allowable stresses reduced to compensate theory of probability used in laminated sections permits higher stresses than for solid sections
Decay hazard in exposed conditions	Preservative treatments for permanent structures, with possible exception of reduced allowable stresses for temporary structures
Swells or shrinks with changes in humidity	Wood dried to expected service conditions of humidity before fabrication & assembly; for glued laminated sections, all laminations held to a 5% range of moisture content (e.g. 6% to 10% incl.)
Although remaining elastic, under long-term (25 years or more) loads, a permanent sag or deflection takes place	Use double calculated dead loads or normal E÷2 for figuring allowable deflection

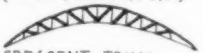
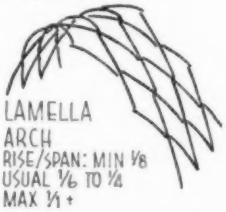
Note: These characteristics are listed as important differences between wood and the idealized, perfectly homogeneous and perfectly elastic material used in the mathematical analysis of strength of materials.

FIRE SAFETY

As is well known, heavy timber (6 in. nom, 5 in. min actual in least dimension) and plank construction is much better fire risk than thin sections and boarding. This fact gives glued laminated arches and frames some advantage over wood trusses and lamella arches. It also explains usual spacing of 8 ft for arches and frames, with 2 in. planking. (Next step is usually 16 to 20 ft spacing with purlins.) Small width (2 in. nom) arch rafters, spaced 24 in. o.c., with 1 in. boarding, are usually limited to farm structures and small warehouses.

RECOMMENDED SPANS

(Maxima in Parenthesis)

TYPE OF STRUCTURAL UNIT	SPAN	SPACING
Joists	Up to 24 ft	16 to 24 in.
Sawn Beams	Up to 30 (40) ft	4 to 20 ft
Glued Laminated Beams	Up to 60 (100) ft	4 to 20 ft
 BOWSTRING TRUSS DEPTH/SPAN ≈ 1/7*	40 to 150 ft (20 to 232 ft)	16 to 20 ft
 FINK TRUSS BEST FOR SLOPES OVER 25°	40 to 60 ft (20 to 90 ft)	12 to 20 ft
 BELGIAN TRUSS	40 to 60 ft (20 to 90 ft)	12 to 20 ft
 PRATT TRUSS FOR SLOPES UNDER 25°		
 PRATT TRUSS (FLAT) DEPTH/SPAN ≈ 1/8 † (WARREN & HOWE ALSO USED)	40 to 120 ft (20 to 150 ft)	12 to 20 ft
 CRESCENT TRUSS	40 to 80 ft (20 to 160 ft)	16 to 20 ft
 LAMELLA ARCH RISE/SPAN: MIN 1/8 USUAL 1/6 TO 1/4 MAX 1/1 †	40 to 120 ft (25 to 165 ft)	— —

TYPE OF STRUCTURAL UNIT	SPAN	SPACING
 TRUSSED RAFTER	20 to 50 ft	24 in.
 ARCH RAFTER OR ARCH RIB RISE/SPAN ≈ 0.45 (THREE-HINGED ARCH)	20 to 60 (80) ft	24 in.
 TWO-HINGED ARCH RISE/SPAN - MIN 1/8 USUAL 1/6 TO 1/4	30 to 100 ft	2, 8 ft or 16 to 20 ft
 THREE-HINGED ARCH RISE/SPAN - 1/1 OR MORE	20 to 100 ft (30 to 180 ft)	2, 4 to 8 ft or 16 to 20 ft
 THREE-HINGED ARCH RISE/SPAN - MIN 1/8 USUAL 1/6 TO 1/4	30 to 100 ft (30 to 175 ft)	8 ft or 16 to 20 ft
 THREE-HINGED RIGID FRAME		

Note: Glued laminated sections used in trusses for curved chords and heavily loaded straight chords and web members. Steel may be used for tension members. Glued laminated sections used for all arches and rigid frames, except that joist sections (2 by 8 to 2 by 12s) used for lamella arches.

Recommendations based on articles by Verne Ketchum (Chief Engineer, Timber Structures, Inc.) and "Architectural Construction" by Theodore Crane (Wiley, '47) and other sources.

** Some authorities recommend 1/6 to 1/7 for depth/span ratio.*

† Some authorities recommend 1/8 to 1/10.

ACOUSTICAL MATERIALS AT WORK

Armstrong's Travertone was used in the attractive Bullock's Tea Room as well as in the Employees' Dining Room.

BULLOCK'S DEPARTMENT STORE, Westwood, California

The architect for this smartly styled branch of Bullock's considered many factors in choosing the acoustical materials. Acoustical efficiency, beauty, and fire-safety were important. Another factor was the need for a material well adapted to the mechanical suspension system to be used.

The architect met all these requirements with Armstrong's Travertone. A mineral wool tile, Travertone is completely incombustible. Its beautifully fissured surface blends well with this décor. It has high acoustical efficiency. Its strength and dimensional stability assure satisfactory performance when mechanically suspended. In addition, Armstrong's Travertone is ideally suited for installation with recessed lighting and ventilating fixtures.

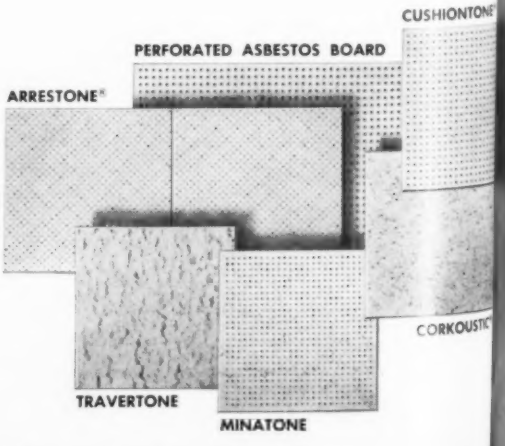
Your Armstrong Contractor will be glad to give you full details on the complete line of Armstrong's Acoustical Materials. For the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 2409 Stevens Street, Lancaster, Pennsylvania.

Architect:
Welton Beckett and Associates

General Contractor:
C. L. Peck

Acoustical Contractor:
R. W. Downer Co.

Ceilings and upper walls of the telephone switchboard room are sound conditioned with Armstrong's Cushiontone. Other office areas in Bullock's are also treated with this perforated wood fiber tile. Cushiontone raises efficiency and morale by absorbing irritating noise from telephones, typewriters, and other office machines.

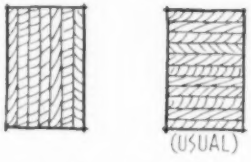


ARMSTRONG'S ACOUSTICAL MATERIALS

STRUCTURAL FORMS—6: Long Spans in Wood

By Seymour Howard, Architect, Instructor at Pratt Institute

GLUED LAMINATED WOOD—BASIC DATA



TYPICAL SECTIONS

Note that grain of all laminations is parallel to length of member (in plywood, grain directions of adjacent plies are at right angles)

Outer plies can be chosen for high strength and/or appearance

Lower-grade wood can be used for inner plies

Wood throughout section can be inspected before fabrication, unlike solid timbers, which may contain hidden defects

Wood throughout section can be seasoned uniformly, reducing chances of large checks and shakes often found in solid timbers

For service conditions involving low moisture contents, inspection and seasoning permit higher design stresses than for solid timbers

KINDS OF WOOD

SPECIES	USE
Douglas fir	General
Southern yellow pine	General
White oak	Ships
Sitka spruce	Aircraft

1. Other species may be used for special purposes of appearance or service

2. For exterior uses, plies may be brush or retort-pressure treated with creosote, creosote and oil, pentachlorophenol or suitable salts, before gluing

KINDS OF GLUE

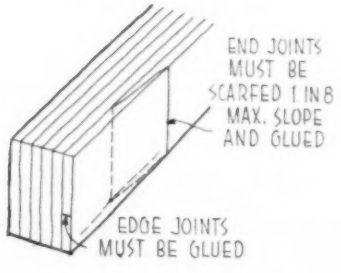
INTERIOR USE (normal moisture not more than 15% in service conditions)
Water-resistant adhesives:
1. Casein Glue (Fed Spec C-G-456), water and mold resistant
2. Urea Resin Glue (Fed Spec C-G-496) — (not for service conditions above 150 F)

EXTERIOR USE (outdoors, underwater or service conditions causing greater than 15% moisture content [e.g. some textile industries]
Waterproof adhesives:
1. Phenol, Resorcinol and Melamine type resin glues, room and intermediate temperature setting, joint military specification Jan-A-397
2. Phenol, Resorcinol and Melamine type resin glues, high temperature setting, joint military spec Mil-A-5534

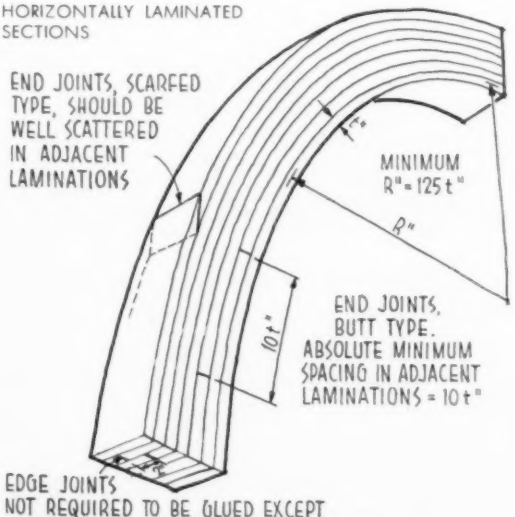
Notes: Chemists and manufacturers are still developing new adhesives; at present time water-resistant types are less expensive

END AND EDGE JOINTS IN LAMINATIONS

VERTICALLY LAMINATED BEAM

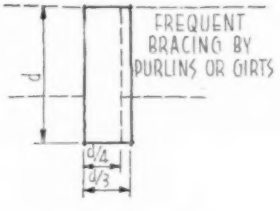


HORIZONTALLY LAMINATED SECTIONS



EXTREME SECTION

proportions recommended for curved members to prevent elastic instability



WIDTH OF LAMINATIONS	Nominal	3 in.	4 in.	5 in.	6 in.	8 in.	10 in.	12 in.	14 in.	16 in.
	Actual	2¼ in.	3¼ in.	4¼ in.	5, 5¼ in.	7 in.	9 in.	11 in.	12½ in.	14½ in.

Actual Thickness	Minimum Radius of Curvature = 125 t in.
¼ in.	2 ft—7¼ in.
5/16 in.	3 ft—3 1/16 in.
⅜ in.	3 ft—10⅞ in.
½ in.	5 ft—2½ in.
⅝ in.	6 ft—6⅛ in.
¾ in.	7 ft—9¾ in.
1 3/16 in.	13 ft—8 1/16 in.
1½ in.	15 ft—7½ in.
1⅝ in.	16 ft—11⅛ in.
2 in.	20 ft—10 in.

(Note: See National Design Specification of National Lumber Manufacturers' Association, and standard specs for structural glued laminated lumber of West Coast Lumbermen's Association and of Southern Pine Inspection Bureau for more detailed information.)
**** Butt joints cannot transmit stress; design must take account of this.***

ORIGINAL

Alsynite

TRANSLUCENT GLASS FIBER PANELS

miracle material for

modern design

send for your free sample

residential

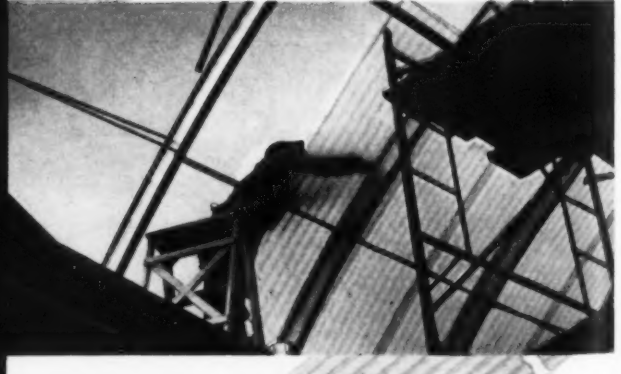
Alsynite for skylights, patio roofs window walls, partitions, sun and wind shelters, awnings, shower stalls, cupboard doors, movable screens . . .

commercial

Alsynite for store fronts, office partitions, luminous ceilings decorative effects, general daylighting, screens, displays . . .

industrial

Alsynite for unlimited daylighting . . . skylights, side walls. No special framing needed. Nests with and installs like corrugated metal.



data: Alsynite is a new kind of structural glass made by combining glass fiber with resin. It is shatterproof, permanent, feather-light (8 oz. sq. ft.) Can be sawed, nailed, drilled. High light diffusion factor. Available in corrugated or flat panels. Seven colors. Proven in use since 1947. Plants in California and Ohio.

ALSYNITE COMPANY OF AMERICA
Dept. A-5, 4670 DeSoto St., San Diego, Calif.

Please send me free sample of Alsynite with complete information and name of nearest distributor.

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COMPANY_____

ADDRESS_____

CITY_____ STATE_____

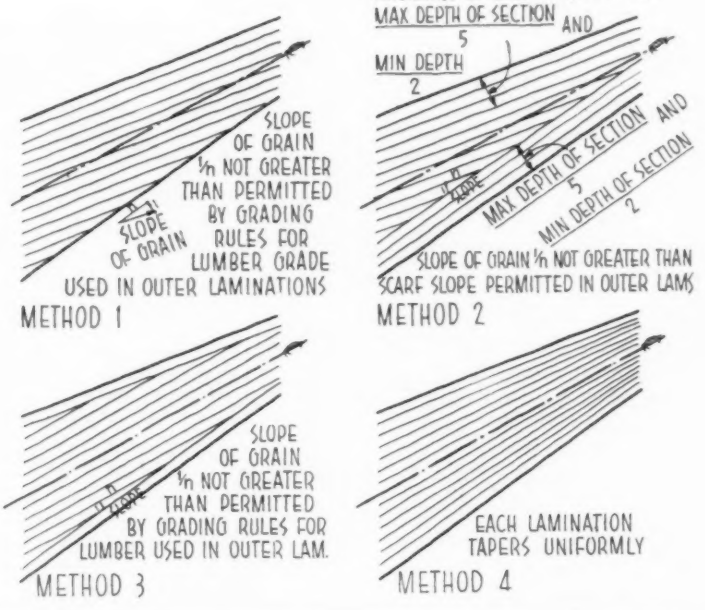
DISTRIBUTORS IN PRINCIPAL CITIES

STRUCTURAL FORMS—7: Long Spans in Wood

By Seymour Howard, Architect, Instructor at Pratt Institute

METHODS OF VARYING DEPTH OF SECTION

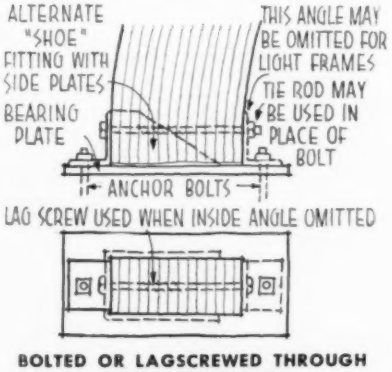
Methods 2, 3 or 4 normally used only if method 1 creates too large slope of grain



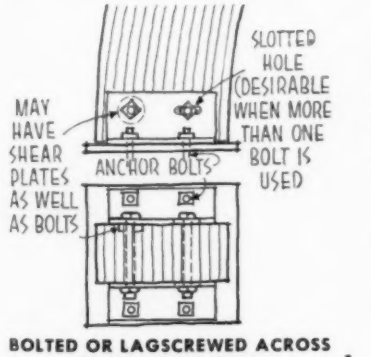
TYPICAL FASTENING DETAILS

Notes: • Special details should be developed for bases of frames and arches exposed to the weather to prevent water from lying around ends of members.
• Indoors as well as outdoors, ends of members should be painted two coats or otherwise treated to reduce tendency to check.
• When more than one bolt is used (except parallel to long axis of wood) slotted holes should be used in jointing metal plate to permit movement caused by swelling or shrinking.

BASE DETAILS

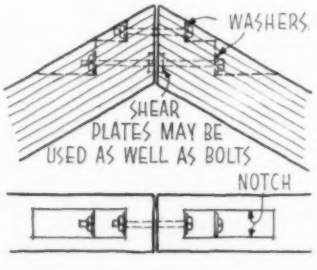


BOLTED OR LAGSCREWED THROUGH DEPTH OF SECTION

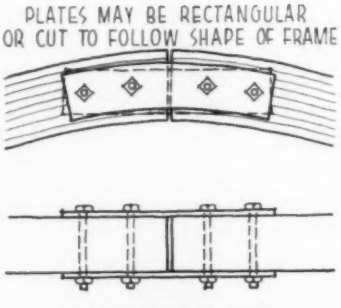


BOLTED OR LAGSCREWED ACROSS WIDTH OF SECTION

CROWN DETAILS

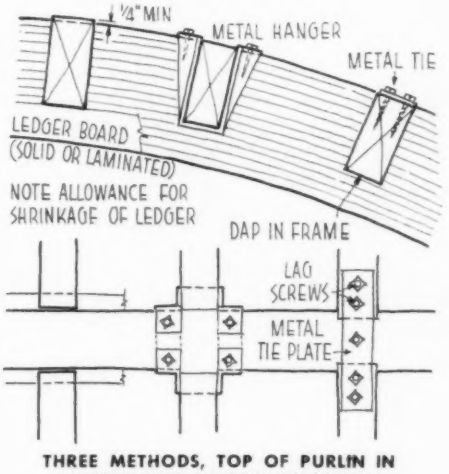


BOLTED THROUGH DEPTH OF SECTION

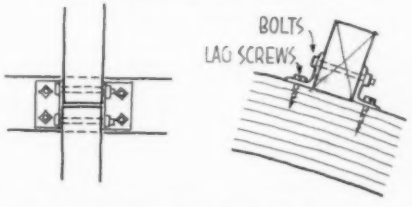


BOLTED ACROSS WIDTH OF SECTION

PURLING DETAILS



THREE METHODS, TOP OF PURLIN IN SAME PLANE AS TOP OF FRAME



PURLIN RESTING ON TOP OF FRAME

Note: Purlins may be solid timbers or laminated.

PORCELAIN ENAMEL—10: Sign Letters

Prepared by Harold Edelman, A I A
Instructor at Pratt Institute

6. Attachment Methods — attachment methods are usually designed to eliminate visible fastenings. They vary considerably among manufacturers, but the basic types are as follows:

a. Letters attached to wall panels before the latter are erected. Bolts are tack welded to back of letter, placed through slotted holes in the wall panel and secured by nuts. Panel and letter are erected as one.

b. Letters attached to masonry or wall panels by means of clips fastened to the wall surface.

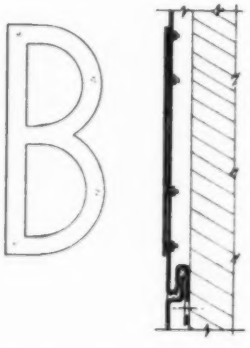
c. Letters are constructed with straps on the rear which have keyhole slots that drop over bolt heads projecting from the wall surface.

d. Curb boxes or raceways are used as a continuous support under the letters which are secured to the curb by means of clip angles. Precautions must be taken not only for proper flashing but for bracing large letters against wind stresses.

Any of these methods may be used with a variety of spacers to project the letters from the wall surface. Chair mounts may be used to raise letters off the top of curb boxes, raceways and canopies.

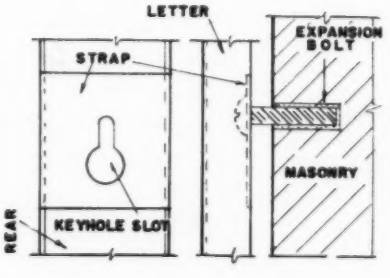
Diagram C.

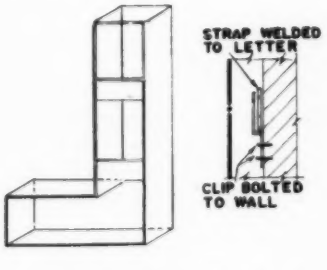
ATTACHMENT OF SIGN LETTERS



Flat letter attached as (paragraph 'a')

Raised letter attached as (paragraph 'b')





Raised letter attached as (paragraph 'c')

Cut drafting costs... Get better prints...

with Kodagraph Reproduction Materials... created for use in your present equipment

DRAFTING COSTS go down when you use Kodagraph Reproduction Materials to protect valuable drawings from wear and tear... to reclaim old, soiled, faded originals... to revise or combine drawings... to copy prints.

And the legibility of your direct-process prints or blueprints goes *up* when you use Kodagraph reproductions of your drawings in print-making. For Kodagraph Materials are silver sensitized, photographic... have the ability to intensify weak detail... step up contrast... drop out stains, creases. And they pass on this improved quality to the final prints.

If you have a blueprint or direct-process machine or vacuum frame

You can produce *positive photographic intermediates directly* from your engineering drawings by reproducing them on any one of four types of Kodagraph *Autopositive* Materials. To do the job—simply expose in your present equipment... and process in standard photographic solutions. No negative step. No darkroom handling—a fast, convenient room-light operation all the way.

1. **Kodagraph Autopositive Paper Extra Thin**—the all-purpose intermediate material for everyday use—gives you intermediates on a durable, white paper base. *Intermediates* which will turn out crisp, clean blueprints and direct-process prints time after time... which will retain their line density and sharpness... and which will remain *photo-lasting* in the files.

2. **Kodagraph Autopositive Paper Translucent...** has an exceptionally durable and translucent paper base... and a print-back speed which is 30% faster than regular Autopositive—*an important advantage in large-volume print production.*

3. **Kodagraph Autopositive Film**—with its highly translucent Kodak safety film base—is especially valuable in reclaiming "hopelessly poor" tracings... and in reproducing extremely fine line detail. It is also widely used to reproduce catalog pages, etc., including half-tone illustrations.

4. **Kodagraph Autopositive Cloth**—is recommended for producing the most durable prints (nearly exact in scale) from drawings in good condition. Its base is white fabric—tough, crease-resistant, highly translucent.

Kodagraph Repro-Negative Paper, which is processed in the same manner as the Autopositive Materials and with the same speed and convenience, enables you to produce positive intermediates directly from blueprints, Van Dykes, and other negative "originals."

If you have any type of contact photocopying machine, you can get negative and positive reproductions of improved quality at lower cost with *Kodagraph Contact Paper*. Its high-contrast photographic emulsion produces photocopies which are easier to read . . . with dense photographic blacks, clean whites. And its extremely wide latitude and amazing uniformity end the need for split-second timing and trial-and-error testing.

Kodagraph Contact Cloth, with an extremely durable, translucent base and with similar emulsion characteristics, is widely used to produce long-lasting second originals from paper negatives. (Unwanted design detail on these negatives can be blocked out before printing.)

If you have an enlarger, projection printer, or process camera, Kodagraph Projection Papers will give you sharp, clean reproductions at any scale – dense photographic blacks, sparkling whites on a durable, Kodak-made paper base. Just the papers you need for reproducing your microfilm and other reduced-scale negatives!

Kodagraph Projection Paper can be printed at high speeds and processed under comparatively bright workroom light. *Kodagraph Fast Projection Paper* can be printed at highest speeds but must be processed under low illumination. *Kodagraph Projection Cloth* is the ideal material for producing extremely durable and fast-printing positive intermediates from reduced-scale negatives.

Increase protection . . . save 98% in filing space with Kodagraph Micro-File equipment. The advantages of modern microfilming are yours *at surprisingly low cost* with Kodagraph Micro-File equipment.

Whether your engineering department be large or small, you will find a precision-built, economical microfilming unit just right for your requirements. One that will record your valuable drawings with photographic accuracy and completeness on *Kodagraph Micro-File Film*—instantaneously . . . for a few cents apiece.

Kodagraph Film Readers give you fast, convenient reference . . . with 100% legibility. *And the Kodagraph Enlarger* allows you to produce facsimile prints in the desired size quickly and economically from your microfilm negatives. *A complete line*—developed and manufactured by Kodak for the utmost precision, convenience, and economy in your microfilming.

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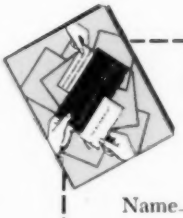
Write today for a free copy of "Modern Drawing and Document Reproduction." It gives complete details on the revolutionary line of Kodagraph Reproduction Materials, which you, or your local blueprinter, can process *conveniently, economically.* Also many important facts on Kodagraph Micro-File equipment.



MAIL COUPON FOR FREE BOOKLET

EASTMAN KODAK COMPANY
Industrial Photographic Division, Rochester 4, N. Y.

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Company_____

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Kodak
TRADE-MARK

PRODUCTS (*Continued from page 207*)

• *Armorply* building panels are of sandwich construction and feature a wide variety of facings and cores. Cores include Kaylo, Celotex and Honeycomb; facings include porcelain enamel steel, electrolytic zinc-bonded steel, aluminum, magnesium and stainless steel. Copper and lead can also be bonded to the Kaylo cores. Different facings can be employed on the same panel but with the Honeycomb cores, the materials must have substantially the same coefficients of expansion to insure panel flatness. With Kaylo, Celotex, and other similar incombustible core materials, any facing may be combined with any other. Both types of panels are rated as incombustible and have good heat insulation characteristics. Maximum standard panel thicknesses are 3 in., but greater thicknesses can be provided if required. Waviness and unevenness of surface is reportedly eliminated with the panels and an unlimited range of colors and textures is said to be available. Advantages cited include minimum maintenance expense, lower costs for foundations and structural framework because of the panels' lightweight, fast erection time, and maximum utilization of floor space. United States Plywood Corp., 55 W. 44th St., New York 36, N. Y.

Vermiculite-Sand Concrete

Resiliency approaching that of wood floors is said to be afforded by a structural vermiculite-sand concrete designed for floor construction where bar joists or Junior I-beams carry the slab. The mixture is said to weigh half as much as ordinary concrete and to have greater insulation value. The manufacturer cites recent tests as having shown that a 3 in. floor slab over 24 in. center joist spacing will carry from 15 to 23 times more live load, depending on the kind of reinforcing used, than the 80 lb per sq ft required for many light occupancy buildings. Compressive and indentation strengths are said to be adequate for use as a base for ceramic or composition tile, linoleum, terazzo or carpeting without the addition of a sand concrete topping. Vermiculite Institute, 208 So. LaSalle St., Chicago 4, Ill.

Wall Mounted Lighting Fixtures

Featuring a new method of wall attachment which is claimed to assure a more secure mounting of fixture and to prevent chipping or cracking of plaster, 26 new models of *Vogue-Liles* have made their appearance in the market. Available in six attractive colors, kiln-baked for extra durability, the pin-up lights are suited to stores, hospitals, theaters, dormitories, residences and many other installations where a contemporary lighting fixture is desired. Attachments are designed for wall-mounting, portables, clamp-ons, screw-ins, clusters, extension pipe and outdoor units. The shade will accommodate up to a 100 watt regular or a 75 watt R30 lamp, and the fixture can be used for direct or indirect lighting. Swivelier Co., Inc., 30 Irving Place, New York 3, N. Y.

Pin-up lighting fixture features new wall-mounting method for added stability

Folding Bleachers

Two new designs have been added to the *Beatty* line of steel bleachers. One of these was developed specifically to meet the specifications of the Honolulu architectural firm of Merrill, Simms & Roehrig, and was used in Honolulu's Punahou High School. This is a folding bleacher, mounted on wheels to form a mobile unit which can be readily moved and which requires no wall or floor anchorage. When folded, the unit occu-

(*Continued on page 224*)

How Honeywell Customized Temperature Control Helps Bell and Howell Meet Wide Range of Temperature Needs

Specially designed system provides precision industrial control, finest comfort—and saves fuel

These dramatic photographs of Bell and Howell's Chicago plant demonstrate the kind of operation that has made the company one of the world's leading manufacturers of motion picture projectors, cameras and microfilm equipment.

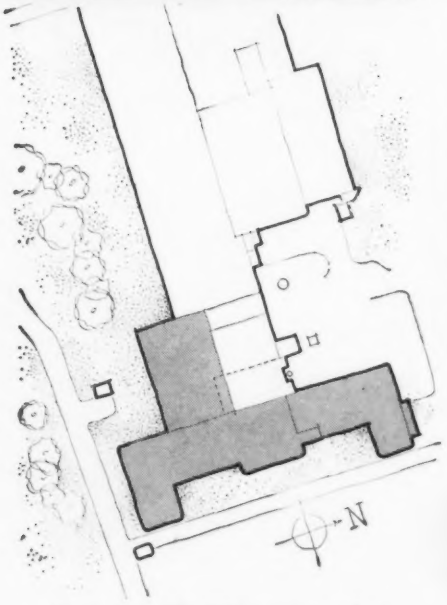
And they serve, too, to demonstrate the great flexibility of Honeywell Customized Temperature Control.

At Bell and Howell, this specially designed system provides factory personnel, office workers and executives with the finest kind of comfort.

But there's more to the story.

Many phases of an operation that produces such precision equipment as cameras, projectors and film demand extremely precise temperatures. These, too, are provided by Honeywell Customized Temperature Control.

And it's this customized control system that enables Bell and Howell to save a great deal on fuel bills each year—by setting back the temperature at night in big factory areas.



Over a half million square feet of factory, office

The shaded area on the floor plan indicates the air conditioned sections of the plant. Located here are offices, some shipping and stores, some manufacturing. The unshaded portion is mainly manufacturing, partly shipping and storage area.

Architectural firms that designed the main plant were Mundie, Jensen, Bourke and Havens, Chicago, and Bruce A. Gordon and Company, Chicago. Mechanical engineering was by Samuel R. Lewis and Associates, Chicago. Honeywell Customized Temperature Control was installed by L. H. Prentice Co., Chicago. Victor Charn of the Chicago firm, Ragnar Benson Inc., was the architect for the new factory area. Here mechanical engineering was done by Nelson and Nettnin, Inc., Chicago. Honeywell Customized Temperature Control here was installed by O. A. Wendt Co., Chicago.

Lens room temperature an exact 77 degrees

To make sure the pitch used in polishing precision optics retains the proper consistency, Honeywell Customized Temperature Control keeps the temperature exactly 77 degrees in the lens polishing room, right. And in Bell and Howell's film plant in Rochester, N. Y., customized temperature control guards another vital manufacturing process. There, a variety of temperatures—all different—are held at the critical level with a tolerance of only one-half of one degree Centigrade.

In the company's projection salon as many as 50 persons can meet to view business and training films. Smoking is permitted, yet the air is never clouded. Honeywell Customized Temperature Control takes care of that—removing stale air and replenishing it with fresh air for complete comfort.

The final test line for Bell and Howell's famous 16 mm. Filmosound projector is shown above. It is in this area that Honeywell Customized Temperature Control makes possible great fuel savings. For here a master thermostat can be turned down at night to lower temperatures when the area is not in use.

Executive offices like this are perfectly comfortable—no matter how changeable the weather outside. Because in the office area Honeywell Customized Control provides an *individual* thermostat for every room. This thermostat can be adjusted by room occupants to give them the exact temperatures they want. And the ultimate in comfort such a system guarantees is shared by all who work in this part of the plant—secretaries, typists, restaurant personnel and executives. This raises efficiency and helps make Bell and Howell a pleasant, comfortable place to work—in August as well as in January.

For Comfortable, Even Warmth in New or Existing Public Buildings, Specify Honeywell Customized Temperature Control

Whether it's a factory, store, office, school, garage—or any size public building—new or existing—there's a Honeywell Customized Temperature Control System to meet your clients' heating and ventilating problems.

Once equipped with a Honeywell Customized Temperature Control System, they'll have the right kind of controls to keep their employees, customers and tenants comfortable—and they'll save fuel besides.

For full facts on Honeywell Customized Temperature Control, call your local Honeywell office. There are 91 across the nation. Or mail the coupon today.

"I'll bet no other factory has better control over its heating and air conditioning," says Bell & Howell Superintendent of Maintenance Branson "Buck" Weaver.

"This Honeywell Customized Temperature Control keeps *everyone* comfortable. And it keeps *me* happy because it requires almost no maintenance. Besides that, I enjoy reporting the latest fuel-saving figures."

MINNEAPOLIS-HONEYWELL
Dept. AR-9-71, Minneapolis 8, Minnesota

Gentlemen: I'm interested in learning more about your Customized Temperature Control Systems for public buildings.

Name_____

Firm Name_____

Address_____

City_____ Zone____ State_____

MINNEAPOLIS
Honeywell

First in Controls

PRODUCTS

(*Continued from page 221*)

pies only 4 in. of floor space, so that adequate room is provided for classroom or other purposes when the bleachers are not in use. Ease of operation is reported to be an important feature of the units, which can be wheeled into place and opened by one man in a matter of minutes. Refolding is also described as simple. A safety brace prevents the possibility of motion or collapse. The weight of the bleachers is evenly distributed by frames spaced 6 in. apart and ½ in. plywood base boards under the base beams protect floors from marring.

Folding bleachers can be easily opened and closed, require minimum storage space

The second development is a double-fold *Rollway* bleacher for use in buildings with lower-than-average ceiling heights. A nine-row, 16 ft section of this unit is only 7 ft high when folded, as compared with a height of 10 ft, 7 in. for a standard single-fold unit. The extended depth is about the same, and the depth when folded is 4 ft, 6 in., which is about 2½ in. deeper than the single-fold. All the units are available in a variety of section lengths and heights.

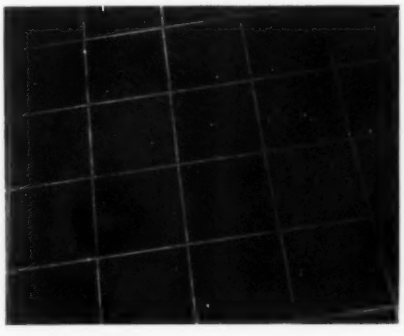
Another innovation in the line is a "jump seat" row which can be pulled out of the folded unit independently, so that complete extension can be avoided

PRODUCTS

where only a small seating section is needed. This is incorporated into the standard bleacher. Beatty Scaffold, Inc., San Francisco, Calif.

Luminescent Floor Strip

The *Heavy Top Ivory Luminescent Floor Strip*, which can be set into terrazzo floors in the same manner as standard metal strips, is said to glow for several hours after exposure to light. Serving the purpose of guiding people



Floor strip will glow in the dark after exposure to light

in darkened aisles of public buildings like theaters, the strip can also be used to create special effects in lobbies and corridors.

The device, $1\frac{1}{4}$ by $\frac{3}{16}$ in., consists of a sheet metal strip stamped with holes and projections, which reportedly assure firm grip by the terrazzo. Stapled to this metal part is an ivory-colored plastic shape which contains a luminescent pigment custom extruded by the Anchor Plastics Company. Marketed by The Rudel Floor Strip Co., Inc., 3709 Third Ave., New York, N. Y.

Double-Face Plastic Tile

A new plastic tile with two usable sides, *Duo-Tex* has a regular ribbed pattern on one face and a striated ribbed pattern on its opposite side. Whichever face is placed outward, the ribbed pattern on the other side is reported to provide a superior bonding surface for

(*Continued on page 228*)

Facts AVAILABLE TO YOU ABOUT...

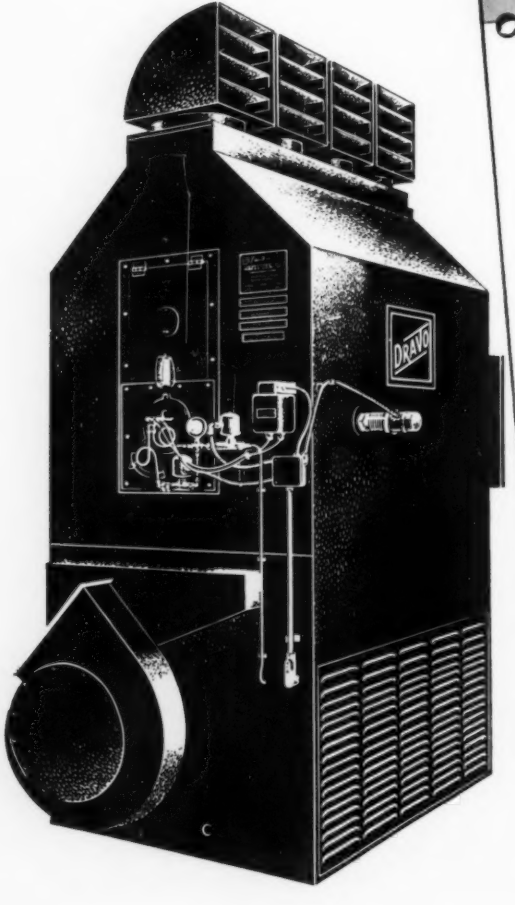
IN THESE *FREE* CASE STUDIES OF ACTUAL INSTALLATIONS...

Complete information—names, diagrams and photographs, along with the results obtained by using Dravo Heaters—is provided in detailed case studies, covering a wide variety of heating problems in many types of educational buildings. If you buy, specify or recommend space heating equipment, these case studies will be of value to you.

Heat is distributed under seats by openings through concrete risers, providing comfort heat where it's needed. By operating the heater fans alone, circulation of air is provided during hot weather, supplying year-'round comfort in the building. Air openings at the top of balcony tiers return air to heaters, reducing roof heat loss and thereby conserving fuel. Get this case study, and others on different problems . . . FREE!

FOR EXAMPLE...

YEAR-'ROUND COMFORT FOR HUGE TEXAS COLISEUM: This oval-shaped exposition building seats over 7,500 people.



DRAVO "Counterflo" HEATER
CASE STUDY REPORT

EXPOSITION BUILDING
Dravo Heaters
are Feature Attraction
at Exposition

User: BEXAR COUNTY COLISEUM
Location: SAN ANTONIO, TEXAS

Dravo "Counterflo" Heaters in use at time of case study	NUMBER	FUEL	OUTPUT (Btu)
	16	GAS	650,000 each

Function of Heaters: To deliver warmed air through nearly 6000 small openings under balcony seats and 25 ducts to box seats and band stand. Allowance is made for 10,400,000 Btu. heat loss per hour at outside temperature of 20 deg. Cool air is circulated by heater blowers for summer ventilation.

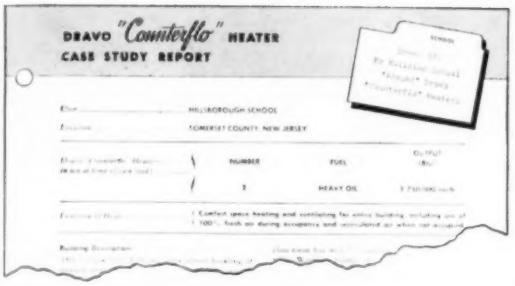
Description of Building:
The coliseum is an oval-shaped, brick and stone structure 460 ft. long, 265 ft. wide, with a dome roof 99 ft. high at center. It has nearly 30,000 sq. ft. in the arena and accommodates 1560 in boxes and 6000 in the balcony surrounding arena. Top balcony seats are 34 ft. above arena floor. The dome roof is of gypsum composition, supported on steel trusses anchored to piers around the perimeter of building.

Location of Heaters:
Heaters are inverted and suspended equidistant from each other behind balcony tiers in an enclosed area 10½ ft. high and 12½ ft. wide which extends around

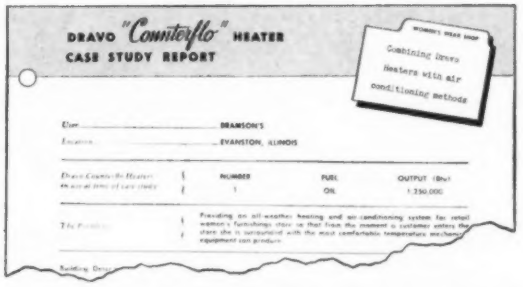
Bexar County Coliseum in San Antonio, Texas, has a unique heating and ventilating system to make spectators comfortable the year around. The huge oval-shaped structure is used for livestock shows and all types of athletic events.

Case studies are 2 to 4 pages long, standard 8½″ x 11″ size for easy filing, and punched for 3-ring binder.

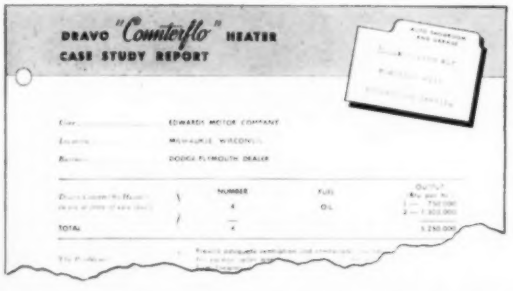
..VERSATILE DRAVO *Counterflo* HEATERS



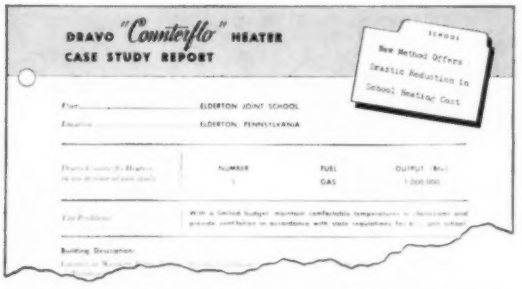
COMFORT HEAT AND VENTILATION FOR ENTIRE SCHOOL—Dravo *Counterflo* Heaters serve as a heating and ventilating system for this 25-room, one-story school building. Initial cost of the Dravo system was 30% less than that of a "wet-type" system for the same structure.



HEATER USES AIR CONDITIONING DUCTS IN THIS NEW STORE—A Dravo *Counterflo* Heater provides automatic heat for this three-level shop in winter. In summer, heater fans supply additional air to the air conditioning system. Initial-cost savings were 38% compared with "wet-type" system costs.



FOUR-WAY SERVICE FOR THIS GARAGE AND SHOW ROOM—Dravo *Counterflo* Heaters provide heat in winter, furnish ventilation in summer, prevent show windows from fogging and thaw snow-covered cars prior to servicing in this 20,000-sq. ft. garage and showroom building.



LOW COST HEAT FOR SCHOOL WITH LIMITED BUDGET—Installation cost of one Dravo *Counterflo* Heater was one-third that of a "wet-type" system at this 6½-unit country school. Quick-heating ability of heater saves fuel; automatic operation eliminates need for full-time attendant.

DRAVO HEATERS OFFER YOU:

- **LOW INITIAL COST**—Users report 30% to 60% savings over "wet-type" systems.
- **EASY INSTALLATION**—Need only fuel, exhaust and electrical connections . . . no ductwork.
- **LOW OPERATING COST**—Direct-fired . . . burn gas or oil . . . readily converted . . . minimum efficiency 80%.
- **AUTOMATIC OPERATION**—on-off or modulating controls . . . no constant attention required.
- **LONG SERVICE LIFE, LOW MAINTENANCE**—Stainless steel combustion chamber eliminates refractory lining.
- **SAFETY**—Approved by American Gas Association, listed by Underwriters' Laboratories, Inc.; Dravo standardized safety control circuit accepted by Factory Mutual Engineering Division.
- **MOBILITY**—Can be moved to any location.
- **FLEXIBILITY**—When floor space is limited, can be wall-hung or suspended from trusses in any position.

VERSATILE DRAVO HEATERS ARE ALSO USED in industry for process curing and drying, tempering of make-up air and temporary heating. Case studies about these functions are also available.

Send this Coupon Today!

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Dravo Building, Fifth and Liberty Avenues
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Company_____ Title_____

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City_____ Zone_____ State_____

PRODUCTS

(*Continued from page 225*)

mastic adhesive. The two patterns can be combined in many different ways to form attractive wall designs. Since the tile is made in nine colors, these may also be combined together for a wide range of decorative effects, according to the manufacturer.

Another feature of the tile is its large size, 9 by 9 in., which is said to make for speedier installations. It reportedly will not peel, chip, warp or shrink and requires only an occasional washing with soap and water. Industrial Plastics, Inc., 1351 W. 73rd St., Cleveland 2, Ohio.

Two patterned sides of plastic tile can be combined decoratively as desired

Synthetic Carpeting

A new, inexpensive floor covering, available in widths of 3, 9 and 12 ft or in standard rug sizes from 24 by 36 in. up to 12 by 21 ft is currently available. Called *Nobility*, the carpeting is made with a heavy coated backing, has a ¾-in. pile, is slightly nubby in quality, and comes in 14 attractive decorator colors which include greige, turquoise, cocoa, moss green, gold and copper. Woven of a specially constructed viscose yarn, it is reported to be wear and stain resistant. Needletuft Rug Div., Cabin Crafts, Inc., Dalton, Ga.

(*Continued on page 232*)

SCR brick* - biggest building news of the year. ...everybody's talking about it...

"SCR brick" HOMES ARE BEING BUILT EVERYWHERE

Here's why –

- Builds solid brick homes at a cost equal to frame.
- Saves time and materials.
- Builds warm, dry walls.
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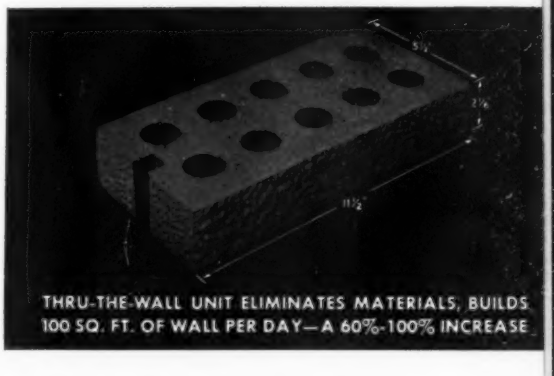
- Meets construction requirements of FHA and all national building codes for 1-story residences.



THRU-THE-WALL UNIT ELIMINATES MATERIALS, BUILDS 100 SQ. FT. OF WALL PER DAY—A 60%-100% INCREASE

"SCR brick" home, Seattle, Wash. Bell & Valdez, Builders

free booklet *"HOW TO BUILD HOMES THAT SELL WITH THE SCR BRICK"* gives full construction details. To get one, just phone or write any one of the offices listed here. We will also welcome your inquiry at our national headquarters. Address Dept. AR-9.

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341 State Street ... Phone 8-1287

NEW YORK 17, N. Y.
1949 Grand Central Term....MUrray Hill 9-0270

CANTON 2, OHIO
306 Market Avenue, North ... Phone 5-5329

CLEVELAND, OHIO
402 Swetland Building ... Prospect 1-5247

COLUMBUS 15, OHIO
81 East State Street ... Fletcher 1440

CHARLESTON 1, WEST VA.
1330 Kanawha Boulevard, East ... Phone 2-6288

DETROIT, MICH.
2671 Ewald Circle, Apt. 2 ... Webster 5-2433

PITTSBURGH 22, PA.
807 Standard Life Building ... Atlantic 1-6393

CHICAGO 1, ILL.
228 North LaSalle Street ... Randolph 6-0578

ST. LOUIS 8, MO.
4117 Lindell Boulevard ... Olive 1155

AMES, IOWA
120½ Welch Avenue ... Phone 2442

COUNCIL BLUFFS, IOWA
535 East Broadway ... Phone 3-8266

MINNEAPOLIS 4, MINN.
402 Wesley Temple Building ... Geneva 7055

DENVER 4, COLO.
116 West 10th Avenue ... Acoma 6884

SAN FRANCISCO 5, CALIF.
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204 Central Building ... Eliot 6227

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Humphrey & Hardenbergh, Inc., Architects

BRIGHTEN THAT IMPORTANT CORNER with . . .

ANDERSEN *Windowalls*®

PATTERN OF SUNSHINE on the floor . . . pattern of nature's beauty framed on the walls . . . these are but two of the important rewards planned for the home owner when the architect specified this corner WINDOWALL of Andersen Gliding Windows. There are others—picture window effect, but with windows that glide easily open. Plenty of fresh air, when desired, but a weathertight wall against cold or storms. Effective both as windows and as walls—these are Andersen WINDOWALLS. *TRADEMARK OF ANDERSEN CORPORATION

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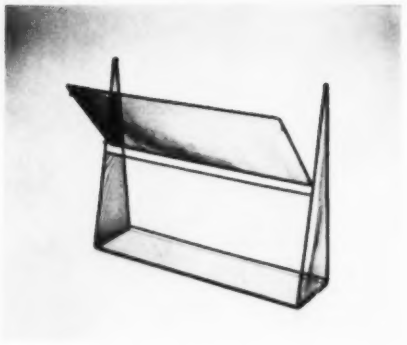
FAMOUS FOR COMPLETE **WOOD** WINDOW UNITS

Write for Detail Catalog or Tracing File of Installation Details or see Sweet's files for specification data. WINDOWALLS *sold by millwork dealers.*

PRODUCTS
(*Continued from page 228*)

Fireplace Accessories

Recently added to the Howard Miller collection of contemporary fireplace accessories were two designs by George Nelson. One of the items is an attractive and practical *Fireplace Screen*. This is designed to open at the top, so that the whole unit does not have to be moved when it becomes necessary to tend the fire. The top section is hinged and can be slanted down easily for accessibility. The screen is made of black finished steel and steel mesh.



Firescreen has convenient top hinged opening for accessibility to logs

Another ingenious design by Nelson is his *Firelighter*. Simple in character, the firelighter consists of two pieces: a pot, measuring 6½ in. in diameter, for kerosene or oil; and a coil-handled shaft which pierces the pot cover and carries, at the opposite end, an absorbent firing stone. When not in use, the stone is left to soak up the liquid in the pot. When ignited and thrust under a pile of logs, the stone acts as kindling. Available at Richards-Morgenthau, 225 Fifth Ave., New York, N. Y.

Hinge Butt Templet

Said to save carpenters and builders much of the time-consuming tedious hand labor involved in cutting hinge butts for doors and jambs, the *Guild Hinge Butt Templet* is reported able to process all the hinge butts for the doors in an average house in one to two hours. Designed for use with the manufacturer's own routers, it can be adapted by means of suitable templet guides to other makes of routers. The templet is adjustable for 2½ in. to 5½ in. hinges on doors up to 7 ft high and eliminates additional measuring, since settings are made from measurement tables on the device itself. It can be set for two or three butts and is used for both doors and jambs. Made of steel tubing and extruded Duralumin and weighing less than 4 lb, the templet is 63 in. long when extended. Porter-Cable Machine Co., Dept. PR-2, Syracuse, N. Y.

Oak Flooring for Radiant Heating

Recommended for use with radiant heat, *Gothic Oak Flooring* is claimed to be subject to less dimensional change than other woods used for flooring, and able to withstand alternate periods of dry heat and excessive moisture. An added feature of this product is the rich, seasoned brown color of the wood. Factory finishing consists of merely coating with pure white lacquer, followed by applications of fine wax. Available in sizes 8 by 8 in. and 12 by 12 in., both 5/16 in. thick, installation is quick and economical, since it is applied directly to the sub-surface with an adhesive. Parkay, Inc., 5000 Crittenden Dr., Louisville 9, Ky.

(*Continued on page 236*)

Select TRANE ...for all your radiation heating needs!

CONVECTORS in 10 attractive cabinet types plus WALL-FIN

Make it easy on yourself. Specification writing is simplified when you select TRANE Convectors and Wall-Fin for radiation heating jobs . . . residential, commercial or industrial. Here's why:

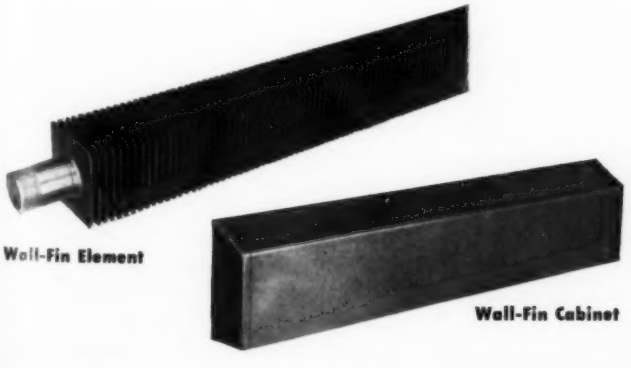
TRANE Convectors meet every requirement for beauty, light weight and simple, low-cost installation. Moreover, you can choose from ten attractive cabinet models (five basic floor types, two wall-hung and three picture window). You can designate sloping or flat tops, free-standing or recessed, hot water or steam.

TRANE Wall-Fin gives you another simple answer to your heating problems where under-window heating or continuous runs are desired. Broad selection range . . . single or tiered heating elements . . . not water or steam.

If you want protective covering (equally adaptable to modern schools or heavy industrials), there's the handsome new sloping-top TRANE Wall-Fin Cabinet that covers any length of Wall-Fin completely, evenly and quickly. Or, you can specify a simple expanded metal grille.

This freedom of choice illustrates consistent TRANE leadership in extended surface radiation . . . ever since TRANE introduced the convector 27 years ago.

For the answer to all your radiation heating needs, contact your nearest TRANE sales engineer or write TRANE, La Crosse, Wisconsin.



Wall-Fin Element

Wall-Fin Cabinet

TRANE Steam and Hot Water Fittings—circulators, traps and valves matched for perfect service with TRANE heating equipment are also available.

TRANE

THE TRANE COMPANY, LA CROSSE, WIS.
Eastern Mfg. Division, Scranton, Pa.
Trane Company of Canada, Ltd. . . .Toronto
Offices in 80 U.S. and 14 Canadian Cities

AIR CONDITIONING EQUIPMENT

PRODUCTS

(*Continued from page 232*)

Medicine Cabinet With Mirrored Sliding Door

The *Gli-Dor* is a newly-designed medicine cabinet with fully mirrored sliding doors and a laminated plastic finish. The doors are on noiseless roller bearings for easy operation. Heavy bulb-edge shelves are fully adjustable to whatever heights are desired and the cabinet has a center divider. Two sizes are available, one providing 12 lineal ft of shelf space and the other furnishing 8 lineal ft. Atkins Wood Products Corp., 103-12 101st St., Ozone Park, N. Y.

Medicine cabinet has adjustable shelves behind mirrored sliding doors

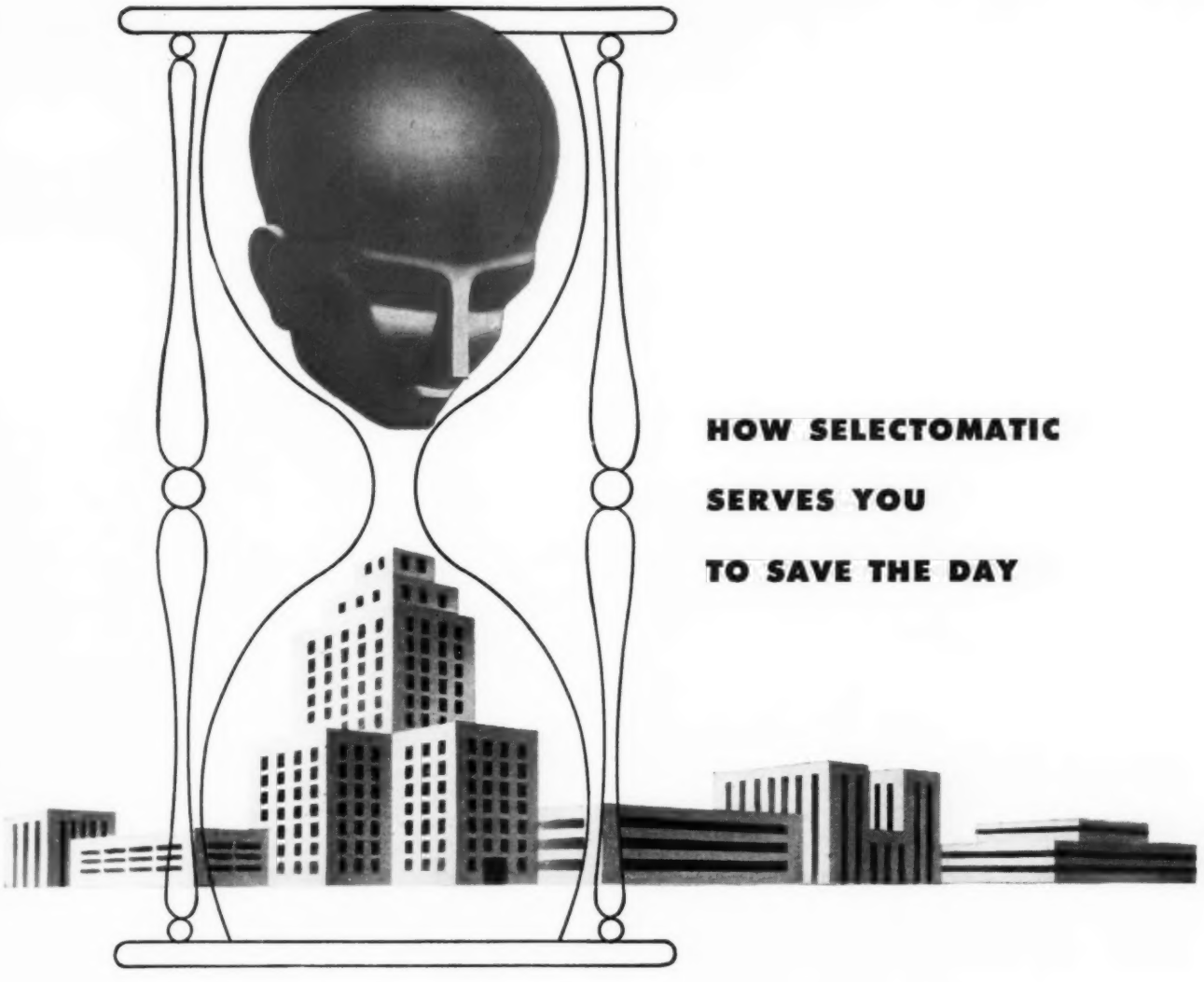
Fireproof Fabrics

Recently introduced at a showing at the Chicago Yacht Club, *Infinity Fireproof Fabrics* are woven entirely of man-made fibers and come in a variety of attractive colors and textures, suitable for upholstery, heavy drapery or casement use. In addition to being completely fireproof, the fabrics are reportedly impervious to mildew, moths, shrinkage and stretching, dry rapidly and need no ironing. Fabrics of the same type have met requirements of the U. S. Navy and the Coast Guard. Suitable for numerous home installations, they are especially recommended for public buildings, such as hotels, offices, theaters, hospitals and other institutions where fire code restrictions must be considered. Edwin Raphael Co., Inc., Holland, Mich.

Metal-Plated Plastics

A new, economical method of plating metal on items molded of *Bakelite* and *Vinylite* plastics is said to make possible lightweight, corrosion-resistant products with hard, high-polish metal surfaces. Such products are reportedly more resilient, lighter to carry and less costly to ship than solid metal and are said to be highly resistant to heat, abrasion and weathering. In the mass-production process employed for the new products, abrasives are used to roughen the smooth plastic surface so that a thin bond coat of silver, applied by immersion or spraying, will adhere. When dry, the bond coat is tested for electrical conductivity which makes it possible to electroplate the objects. A base coat of copper plate is overlaid with a thin layer of the desired metal finish. Careful control during the electroplating process is said to insure uniform metal thickness on plastics molded in even very intricate shapes. Metal can be plated in twelve colors, and two different colors can be plated on the inner and outer surfaces of deep molded plastics to produce a special inlay effect. Hardware and shielding for electronic circuits are among the products which can be produced by the process and may be plated with copper, silver, gold and other metals. Plastiplate Company, Inc., South River, N. J.

(*Continued on page 240*)



HOW SELECTOMATIC SERVES YOU TO SAVE THE DAY

You know as well as anyone how much wasted time can cost in today's race against the clock. Long waits for inefficient elevator service, for instance, can waste a lot of time . . . can mean aggravating delays when promptness is so important.

But unique Westinghouse Selectomatic elevators cut your waiting time to a minimum. This fabulous elevator control system responds and dispatches cars in accordance with all traffic conditions.

And for extra time-saving speed, Selectomatic installations now include Westinghouse Synchro-Glide Landing Control. It makes accurate landings extra-smooth, cushion-soft.

If you have a part in elevator planning or buying, test-ride the new Selectomatic with Synchro-Glide Landing before making any decisions. See how smooth-riding and time-saving an elevator can be. For names of Selectomatic installations in your locality, contact the nearest Westinghouse Elevator office, or write Westinghouse Electric Corporation, Elevator Division, Dept. D1, Jersey City, N. J.

For years, Westinghouse engineering developments have stimulated the vertical transportation industry to strive for ever-higher standards of quality and efficiency. In every phase of vertical transportation—equipment, maintenance and service—Westinghouse has been the vanguard for progress. So, whatever your traffic problems may be—there's a Westinghouse Integrated Vertical Transportation System to solve them completely. Look ahead with the leader . . .

YOU CAN BE **SURE**... IF IT'S **Westinghouse**

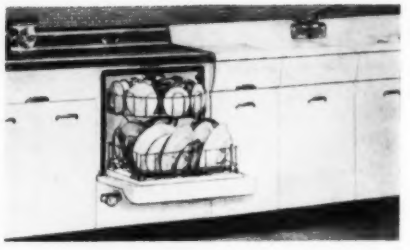
J-98624

PRODUCTS

(*Continued from page 236*)

Automatic Dishwasher

Available in three different models, a new *Swirl-Clean Action Dishwasher* has been introduced by Crosley. Featuring a front opening which leaves the top clear for table use, the units have upper and lower racks individually mounted so that they slide out freely on nylon bearings for easy loading and unloading. The upper rack, which is vinyl covered, revolves slowly with the action of sprays of hot water in the wash and rinse cycles — thus assuring thorough cleaning of dishes. Washing and rinsing action is accomplished by an impeller which cascades hot detergent-filled wash water and clear hot rinse water over every dish, cooking utensil and piece of cutlery in both lower and upper racks. An electric heater unit keeps the necessary high temperature of the water for the entire 34 min required to complete the wash, rinse and drying action. Other advantages of the washer include an action which may be stopped or started at will to permit interim loading or unloading without loss of washing solution, an easy-to-load detergent holder which eliminates messy, mechanical holders, strong non-sag vinyl-covered steel racks, and a provision for heating plates before meals are served. Crosley Div., Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio.



Automatic dishwasher has detachable trays to facilitate dish stacking

Textile Mill Lighting

Recent installations of fluorescent lighting in seven southern textile mills are reported by *Sylvania* to have dealt successfully with the particular problems inherent in the operations of such industries. The chief of these encountered were the adverse high humidity conditions which are purposively maintained in the mills. The manufacturer's Slimline lamps with dydrophobic coating and industrial type fluorescent fixtures with weatherized top housing and porcelain reflectors are said to have proved successful under these conditions in regard to both function and endurance. Two of the plants employ the manufacturer's new Cool White lamps, while the others use daylight fluorescents. The trend, however, in such installations is reported to be toward the use of the former, which have a higher lumen output than the older lamps. Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.

Perimeter Air Diffuser

The *Titus* perimeter air diffuser for heating and cooling is so constructed that installation is made with back of grille flush with wall. However, the duct work leading to the grille comes not through the wall, but through the floor. The baffles on the inside of the diffuser are reported to throw air streams in a 180 deg arc. Titus, Inc., Waterloo, Iowa.

(*Continued on page 244*)

Shingle-Backer offers extra beauty, and comfort at a saving!

Insulite's new method of applying outer-course shingles over Insulite Shingle-Backer and Bildrite Sheathing cuts sheathing and under-coursing time as much as 50%; increases bracing strength; doubles insulation value; produces deep, even shadow-lines—saves $80 to $120 on the average home!

Facts For Architects. The Insulite Technical Service Department will gladly supply you with complete data on this new, accepted double-coursed shingle application method developed by Insulite. Please have your secretary write Insulite, Minneapolis 2, Minnesota.

BUILD AND INSULATE WITH DOUBLE-DUTY

INSULITE

MADE OF HARDY NORTHERN WOOD

INSULITE AND BILDRITE ARE REG. T.M. U.S. PAT. OFF.

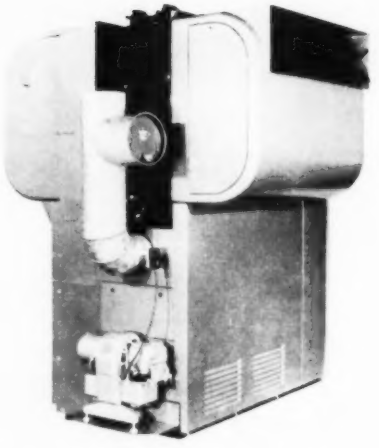
Then, Insulite Shingle-Backer. Handy four-foot panels apply faster and easier than wood under-course shingles... reduce application time by half. Produce deep, even shadow-line. Eliminate waste. Waterproofed throughout. Shingle-Backer and exterior shingles combined, have approximately twice the insulation value of double-coursed wood shingles.

MANDO INSULITE DIVISION, Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota

PRODUCTS
(*Continued from page 240*)

Oil-Fired Air Conditioner

A self-contained, oil-operated unit that cools in summer and heats in winter and has no motor, compressor or other moving parts in its refrigeration system has been developed by *Servel*, and is now being manufactured as part of the line of "all year" air conditioners made by this manufacturer. Like earlier "all year" conditioners that operated on gas or steam, this unit uses a single source of heat for both cooling and heating, the former being achieved through application of the absorption principle which has been used in the manufacturer's household refrigerators for many years. In the new unit, a low pressure oil burner with adjustable input capacity of .6 to 3.0 gal. per hr heats a compact steam generator which provides energy for both cooling and heating. The unit also humidifies air in winter, dehumidifies it in summer and filters and circulates it year round. Remote control is said to permit instant regulation of temperature. A special control is available that will switch the unit to either heating or cooling when the temperature reaches a predetermined level. The cooling capacity of the unit, Model DE-96-OF, is said to be equal to that of 5.4 tons of ice per day. The heating output is 96,000 Btu per hr. The model, it is reported, will air-condition a residence of seven to eight rooms containing from 17,000 to 27,000 cu ft of space. The present model will soon be followed by two other models, a 3.3. ton unit with 96,000 Btu output per hr and a 5.4 ton unit with 144,000 Btu output. The air-conditioners will burn either No. 1 or No. 2 grade oil and any oil tank that is used for automatic heating installations will, it is said, meet the storage requirements of these units. Servel, Inc., Air Conditioning Division, Evansville 20, Ind.



Oil-fired air conditioner has no motor, compressor or other moving parts

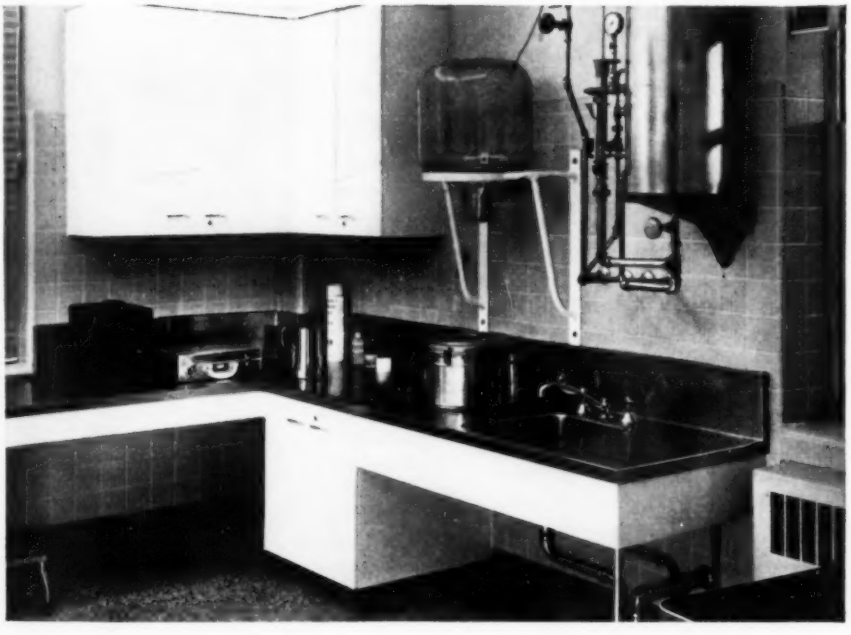
Ventilating Side Light Units

Designed to eliminate the need for a screen or storm door, the *Ventilating Side Light Unit #FL70* may be installed on one or both sides of an entrance door. Aside from the fact that the units provide ventilation and light, they give an unobstructed view to the outside, insuring control against intrusion. A built-in screen lets air circulation through, yet prevents flies and other pests from entering. Each unit is completely factory assembled and carton packed with installation instructions. Farley & Loetscher Mfg. Co., Dubuque, Iowa.

(*Continued on page 248*)

to aid human vision . . .

new tones of real clay Suntile provide interiors that are easy on the eyes



Light Pearl Gray 333

Bright Pearl Gray 733

Wherever critical seeing tasks are performed, authorities say a neutral, non-distracting background is advantageous.

Likewise, it is important to reduce glare and produce a better, more diffuse light reflection.

Proper attention to these factors allows the eye to concentrate with less strain on the involved detail of inspection operations, small parts assembling, laboratory or research work, surgical technique or classroom study.

The new Suntile functional color line includes soft tones and finishes that were developed with the *eyes in mind.* With them you can design and build interiors that will give better lighting, improve production, and reduce accidents . . . interiors that integrate the room with the task to be performed.

And remember, all Suntile products are real clay tile, thus reducing maintenance and repair to a minimum and making cleanliness easy to achieve with soap and water.

SEND FOR NEW COLOR BOOKLET. To help you select the *right* color for commercial, industrial and institutional interiors we have prepared a new descriptive booklet, "Suntile Functional Color Recommendations." Your Authorized Suntile Dealer will give you a free copy or you may write us direct, Dept. AR-9, **The Cambridge Tile Mfg. Co., P. O. Box 71, Cincinnati 15, Ohio.**

Suntile LIGHT PEARL GRAY, BRIGHT PEARL GRAY

Versatile colors of wide application

Gray is one of the most acceptable colors in the tile field. These two Suntile grays are new tones developed to meet specific needs of commercial, industrial and institutional interiors. Light Pearl Gray, for instance, has a soft "satiny" tone. It is a neutral shade that will not distract the eye and is helpful where glare should be avoided and eyestrain relieved. Like Suntile Sea Green, Light Sea Green, Marble Tan and Fawn, Light Pearl Gray is most suitable for operations involving critical and severe use of the eyes.

Bright Pearl Gray has a hard, lustrous finish that is virtually scratch-proof. It is best applied where critical seeing tasks need not be performed as in larger, more open wall areas. These two new Suntile colors are part of the Suntile line of functional colors developed by Faber Birren, noted color authority, and The Cambridge Tile Mfg. Co.

WEST COAST OFFICES

The Cambridge Tile Mfg. Co.
470 Alabama Street,
San Francisco 10, California

The Cambridge Tile Mfg. Co.
1335 S. La Brea
Los Angeles 19, California

SUNTILE OFFERS YOU BOTH • BETTER TILE • BETTER INSTALLATION

Architectural Engineering

PRODUCTS

(Continued from page 244)

Automatic Curtain Controller And Drapery Track

• *Tom Thumb*, a miniature automatic curtain operator, is designed for use with light and medium weight draperies. The machine, which is equipped with a gear-motor unit enclosed in a sheet metal casing, reportedly can be started, stopped or reversed at any point along the travel by a flip of the switch.

The control is recommended by the manufacturer for track spans up to approximately 16 ft in length and for curtains weighing up to 48 lbs. Two control switches and a mounting bracket for installing the machine come with the unit. The device can be plugged into a conventional AC-DC outlet and will operate on 25, 50 or 60 cycles current. The dimensions of the control are approximately 4 by 5 by 6 in. and the unit weighs about 6 lbs.

• *Spanorama*, a light-to-medium-duty curtain track, is said to afford noiseless operation because of its construction principle, which employs two balanced rubber wheels rolling on two parallel treads. Available in either aluminum or magnesium, the track features the use of ball-bearing sheaves on each end of the track as well as on the floor pulley. The ball-bearing end pulleys are adjustable to any point along the travel by turning the nut.

The device, which can be obtained in 20 ft sections, has a specially designed splicing clamp for extending or joining the track section. Master carriers are constructed to provide an 11 in. overlap, and balanced carriers are furnished along every 6 in. of track. Three types of floor pulleys are available: standard, tension with spring and adjustable. The new drapery track will reportedly support curtains up to 16 ft in length when machine operation is employed; for hand operation the manufacturer recommends lengths up to 20 ft. Automatic Devices, 116 N. 8th St., Allentown, Pa.

Anti-Rust Paint

PCA-100, a penetrating and sealing anti-rust paint, reportedly can be applied directly over rusted surfaces. The

(Continued on page 253)

PRODUCTS

(*Continued from page 248*)

paint is said to be suitable for both interior and exterior use and to be effective in preventing rust on new metal or stopping rust action on present rusted metal. The manufacturer claims that the paint can be applied over rust without extensive surface preparation such as wire brushing, scraping or sand blasting. Upon application it is said to penetrate through the rust layer into the base metal and to seal the surface against further rusting. It can be applied by either brush or spray, but because of its penetrating characteristics, should be used solely as a finish coat. Although it is furnished only in black, a companion product, *PCA-101*, a clear paint with equal properties for rust prevention, can be painted over with any standard paint of any color. Both are available in 1, 5 and 55 gal. sizes. Paint Corporation of America, Fidelity Building Cleveland 14, Ohio.

Pre-Built Fireplace

Available in free-standing wall or corner models, *Hearthplace* pre-built fireplaces offer an economical addition of a fireplace to a new or existing home. The unit is offered in two finishes, mahogany or birch. Shipped fully assembled, the manufacturer states that it can be installed, complete with chimney, in a day.

In operation, air is circulated over the entire fire chamber before reaching the outlet duct at the top of the unit. The producer claims that the exterior surface temperature does not exceed room temperature. Heavy mineral wool insulation is provided throughout in addition to an insulated base. An Underwriters' Approved porcelainized steel or tile chimney with 1½ in. of insulation in an outer sleeve of metal is provided as optional equipment. Dimensions of wall model: 44 in. wide, 26 in. deep, 54 in. high; hearth is 12 by 40 in.; shipping weight is 460 lb; corner model: 59 in. wide, 30 in. deep, 54 in. high; hearth 12 by 40 in.; depth from corner 36 in.; shipping weight 500 lb. Hearthplace Inc., 193 No. Elkhart Ave., Elkhart, Ind.

(*Continued on page 256*)

Above: Longspan Joists – 412 Tons

Below: Food Terminal – 650 x 340 Feet

Food Fair Stores' giant new warehouse at Linden, N. J., built to serve New York City, Long Island and northern New Jersey, will provide 221,000 sq ft for storage of groceries. Bethlehem Longspan Joists have cut down column interference and saved valuable space for storage and conveyors.

Used as roof supports in warehouse, factory, garage, store, or similar building, Longspans enable you to plan unobstructed areas with spans up to 64 ft or more. The result is greater freedom in the arrangement of stockpiles, partitions, fixtures, machinery.

More advantages: Bethlehem Longspans reduce the need in masonry walls for pilasters which often interfere with wall design. These joists save construction time because pipes, conduits and ducts can be run through the open webs in all directions. Furthermore, Longspans reach the job completely fabricated and clearly marked, ready for placing.

Bethlehem Longspans are good joists to remember when you plan your next industrial building. Our nearest sales office will be glad to furnish complete information. Or send your inquiry to us at Bethlehem, Pa.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

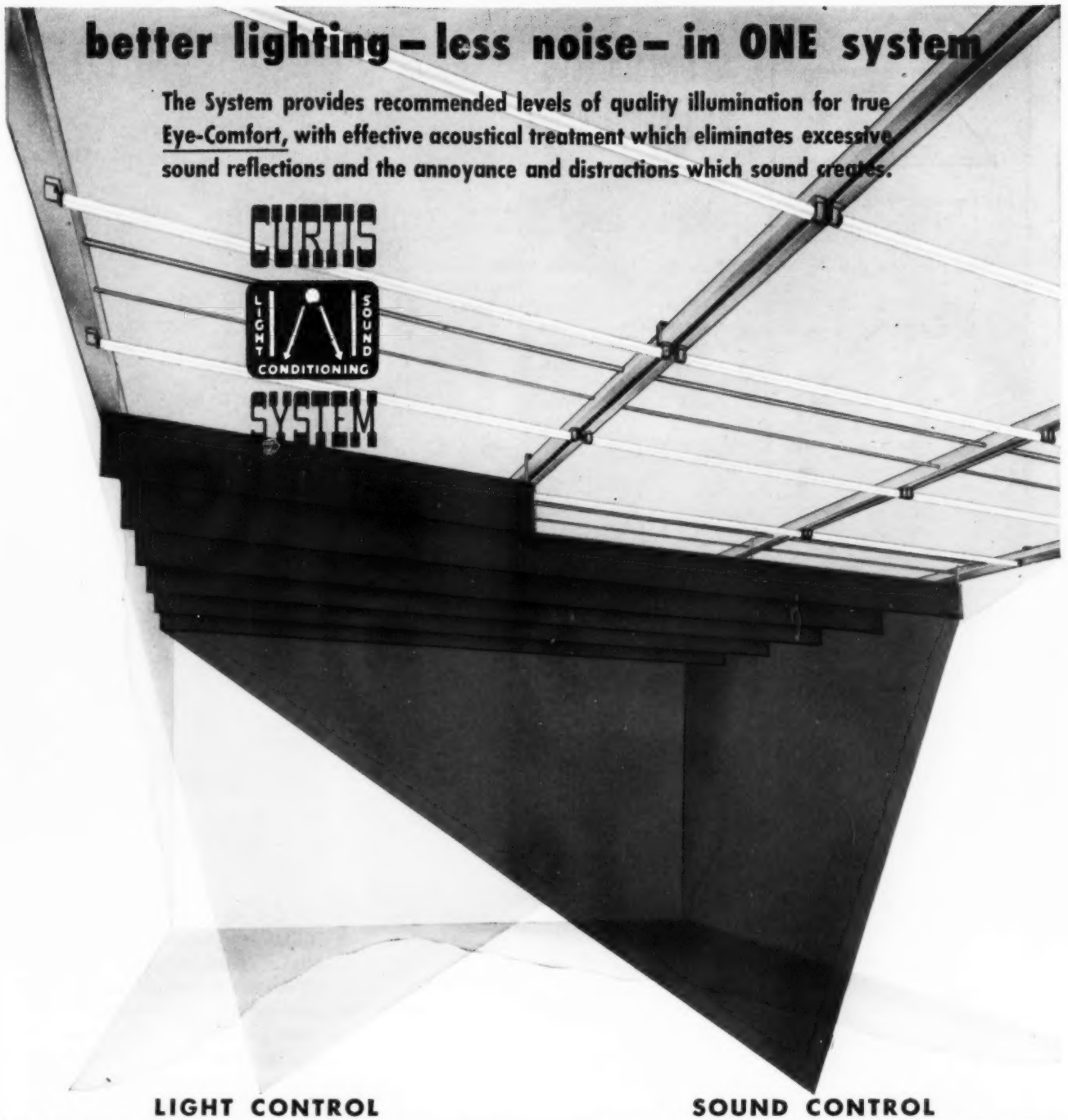
★ BETHLEHEM STEEL ★

BETHLEHEM LONGSPAN JOISTS

better lighting – less noise – in ONE system

The System provides recommended levels of quality illumination for true Eye-Comfort, with effective acoustical treatment which eliminates excessive sound reflections and the annoyance and distractions which sound creates.

CURTIS LIGHT SOUND CONDITIONING SYSTEM



LIGHT CONTROL

The lighting system* of this revolutionary new method is an extendible arrangement of channels carrying the control equipment and wiring. T-12, 96-inch, 72-W. slimline lamps are mounted like ladder rungs between and at right angles to the Curtistrip channels. This system is supplied completely wired with ballasts and lampholders. All metal parts are finished baked white "Fluracite" enamel.

*Listed by Underwriters' Laboratories, Inc.

CURTIS
LIGHTING, INC.
6135 W. 65th Street
Chicago 38, Illinois

SOUND CONTROL

The acoustical element consists of a series of vertical panels positioned between the fluorescent lamps to provide recommended shielding and adequate sound absorption. These panels are constructed of high quality, high reflectance, perforated acoustical material with washable white flame retarding finish, supported by a rolled steel frame.

A 20-page comprehensive bulletin with photographs and technical diagrams is available without obligation. Write Dept. 13-18.

Name_____

Company_____

Address_____

City_____ State_____

PRODUCTS

(*Continued from page 253*)

New Hand Tool Permits On-the-Job Mitering of Metals

Reportedly allowing precision mitering of metals on the job, the *Metalmitre* has a snap-in feature which is said to make dies instantly interchangeable. The various available dies are made of hardened and precision ground tool steel

Hand tool for mitering features interchangeable dies

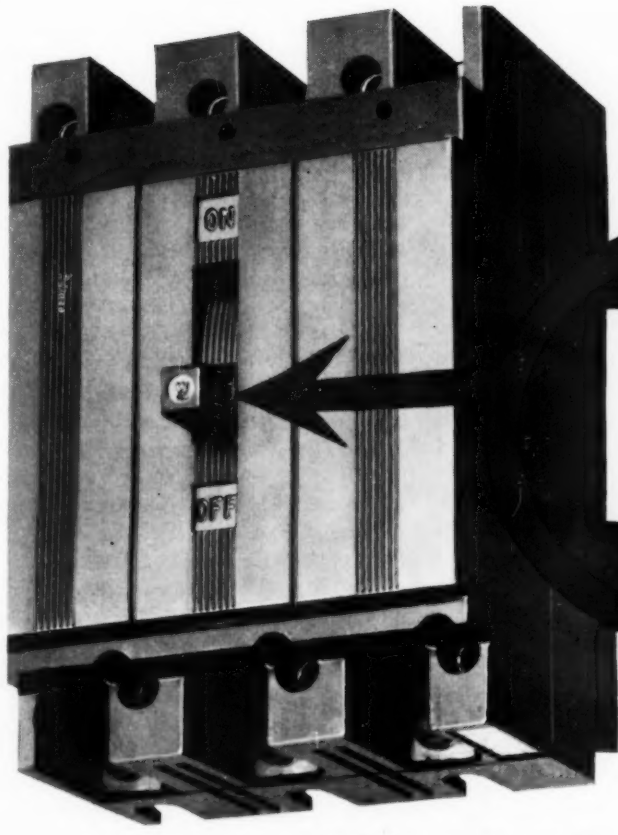
and, according to the manufacturer, are capable of burr-free mitering, notching, slotting of non-hardened steel up to $\frac{1}{32}$ in. and metals like copper and aluminum up to $\frac{1}{16}$ in.

The hand tool, which weighs 2 lbs when assembled, can be used for work with moulding, sheet metal, fiberboard, plastics and masonite. Lander & Abbott, La Crescenta, Calif.

Contemporary Furniture Group

Set on frames of either black metal, natural or ebony wood, the *Duplex* furniture line consists of 29 different items including sofas, loveseats, chairs, foot stools, tables, etc. Construction in the upholstered pieces is of either foam rubber over rubberized hair or rubberized hair and cotton — both over springs. Both buttoned and plain tight backs are available, and models may be obtained with or without arms. Tables in the new group have glass, wood or marble tops. Arrow Upholstery Co., 119–125 W. 24th St., New York, N. Y.

(*Continued on page 260*)



New 3-pole "E" Breaker. Also available in 1 and 2-pole models. 5-100-ampere rating, 5000-ampere a-c interrupting capacity. 240 volts a-c, 125/250 volts d-c.

100 AMP

New Westinghouse "E" Breaker Uprated from 50 to 100 Amps

GIVES TWICE THE CIRCUIT CAPACITY IN SAME CIRCUIT BREAKER FRAME SIZE

Here's a low-cost way to provide for increased power needs. The new Westinghouse 100-ampere "E" Breaker doubles circuit capacity *without increasing breaker frame size!* In lighting and distribution panelboards, switchboards and other enclosures, it saves critical mounting space—greatly expands capacity.

To maintain service on temporary peak overloads—yet, give instant short-circuit protection—"E" Breakers are equipped with thermal magnetic trip. Breaker cases are sealed after calibration—trip ratings are noninterchangeable, nonadjustable.

Standard Westinghouse AB Breaker features on this new line include: "De-ion®" method of arc extinction . . . non-welding silver-alloy contacts . . . corrosion-resistant bearings and parts . . . trip-free, quick-make, quick-break mechanism.

In a circuit breaker there's no substitute for sound engineering design and quality construction. Look to Westinghouse.

Call your Westinghouse Representative or write for Circuit Breaker Book B-5407, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

J-30122

"Of Course, Circuit Breakers Save Money!"

DESIGN TESTED AND VERIFIED in the Westinghouse HIGH POWER LABORATORY

YOU CAN BE SURE...IF IT'S Westinghouse

AB CIRCUIT BREAKERS

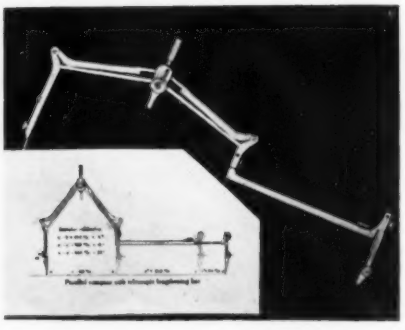
THE COMPLETE LINE

WESTINGHOUSE

PRODUCTS
(*Continued from page 256*)

Parallel Compass with Telescopic Lengthening Bar

The construction of this parallel compass is said to insure automatic parallel opening of the lower legs of the compass, without curving the knees of the instrument. It is therefore reported that pen and pencil holders will always stand in a 90 deg position to the drawing paper.



Parallel compass can be locked in any position, has lengthening bar

"Geared Head" construction is one of the instrument's features, and the compass reportedly can be locked in any position so that circles of the same diameter can be redrawn without deviation. The instrument is precision made of nickel silver. A. Partrick Company, 9 Grove St., Westwood, N. J.

Luminescent Materials

Produced in soft pastel shades with an afterglow lasting for several hours, *Neoglo Day-Nite* colors are available in the following forms: Paints, for brush, screen and spray application; coated paper and coated fabric; plastic sheeting; plastic dispersions; and plastic moulding powder. Typical uses of this new material are in directional signs; furniture trim; electric outlet plates and switches; guidemarkers for baseboards, stairs, stair railings; hospital and sick room appointments; instrument dials and many others.

Neoglo outdoor fluorescent paints, for use on billboards or other blacklight applications are said to resist sun fading and exposure to weather much longer than "daylight" fluorescent materials. The indoor paints are designed for art applications of all kinds. Black Light equipment is also available. Vietze Luminescent Co., 2875 Milburn Ave., Baldwin, L. I., N. Y.

Rubber Base Coating for Walls, Floors and Exterior Masonry

Applied with brush, roller or sprayed on, *ParaTex* rubber base wall coating is a dispersed rubber-resin coating which may be used over painted or unpainted surfaces — over plaster, wall board, brick, concrete, asbestos cement board and dry wall. It is reported that no primer or sealer is needed and that no unpleasant paint odors result from its use. Available in a variety of attractive colors, the coating dries in a very short time — enabling the hanging of pictures on the same day.

Another similar Truscon product is a chlorinated rubber base floor coating for interior and exterior concrete floors. Not affected by naphtha, gasoline, alcohol or alkali, it is also recommended for coating lawn furniture, boats, etc. One gal. will provide one coat for 300 to 400 sq ft area of unpainted concrete or two coats for a 200 sq ft area.

Para-StoneTex is used for protecting

(*Continued on page 264*)

in!"

Kitchen and dining area—General Electric "Young America Home"

HOUSE" plans and promotions!

features—the attractive layout of kitchen-laundry-dining areas, the quality of G-E matched appliances—all of which would make the house sell quickly. In effect these builders said "We want to build a *Young America Home* in our community. Count us in!"

All this happened *before* the ink was dry on the fine builders' promotion and publicity kit we were printing!

Maybe there's still an opportunity for *you* to sponsor a G-E *Young America Home* in *your* community.

If you're interested, get in touch with your local G-E distributor, or the Home Bureau, General Electric Company, Louisville 2, Kentucky.

Laundry and frozen-food storage area —General Electric "Young America Home"

GENERAL ELECTRIC

Columbus, Ohio—Max Stewart
Denver, Colo.—T. W. Anderson & Co.
Des Moines, Ia.—John A. Reppert Co.
Evansville, Ind.—May Homes & Supply Co.
Glenview, Ill.—Davis Realty Co.
Greensboro, N. C.—P. O. Barber
Houston, Tex.—H & D Construction Co.
Indianapolis, Ind.—Keith Nelson Co.
Indianapolis, Ind.—Dawson Construction Co.
Jacksonville, Ill.—Carroll Rexloat
Kalamazoo, Mich.—Harry A. Hurni
Kansas City, Mo.—A-L Huber & Son
Louisville, Ky.—Wm. Sunderhauf
Lubbock, Tex.—Geo. W. Gray
Madison, Wis.—Ivan Gregory
Magnolia, Ark.—Magnolia Builders
Minneapolis, Minn.—Ezra Osterhus
Mobile, Ala.—Gulf Development Co.
Needham, Mass.—Arthur Oman & Son
New Haven, Conn.—L. L. Darley
New Orleans, La.—Lionel F. Favret
Pittsfield, Mass.—Vacchina & Mazza
Plainview, Tex.—Harrison & Smelser
Portland, Ore.—Kenneth Birkemeier
Rhinebeck, N. Y.—M. W. Linville
St. Paul, Minn.—Donnay-Reitz Const. Co.
San Antonio, Tex.—City Lumber Co.
Shreveport, La.—E. A. Thorpe & Co.
Snyder, N. Y.—Genrich Builders, Inc.
Springfield, Mass.—Louis DePalma
Springfield, Mo.—Dell Holmes
Terre Haute, Ind.—Newlin Johnson Co.
Toledo, Ohio—Roger Dunbar
Verona, N. J.—Fairview Const. Co.
Wichita, Kans.—Bodine Const. Co.
Williamsport, Pa.—Incorporated Real Estate Investors
Winder, Ga.—Brodus Williams
Wyandotte, Mich.—S. S. Broughton

PRODUCTS
(*Continued from page 260*)

and decorating exterior or interior brick, concrete, stucco, asbestos siding and similar building material. Resistant to moisture, it is said to provide a protective coat against moisture, frost and weathering. Truscon Laboratories, Div. of Devoe & Reynolds Co., Inc., Caniff & Grand Trunk R.R., Detroit 11, Mich.

Storage Wall Units

Designed for bedroom, dressing room, den, kitchen and utility room, as well as numerous other installations, *Bilt-Well Cabinets* are constructed of clear, kiln dried Ponderosa Pine, sanded to a smooth surface. Available in graduated sizes to fit any space, the cabinets may be enameled or finished natural. Since all parts are completely machined, prefitted and pre-assembled for carton packaging, installation is simplified. All hardware, with exception of nails, is included. Designed for use as kitchen cupboards, bedroom wardrobes, bathroom linen cabinets, toy or tool chests, they are also of value in stores, offices, laboratories, etc. Carr, Adams & Collier Co., Dubuque, Iowa.

Storage units used here along bedroom wall are available in graduated sizes

Nylon Marked Mason's Line

The new *Tru-line*, an elastic marked mason line, reportedly makes it possible to establish head joints and openings automatically. Available for both modular and standard masonry units, the device allows a mason to lay units at any point of the wall, according to the manufacturer. It is claimed that line-tagging up to at least 65 ft is eliminated and that the line will not sag or break under extreme moist or dry conditions.

Made of yellow nylon cord, the line has scientifically measured blue and red non-fading waterproof markings, and can be used in laying bricks, tile and concrete blocks. The line is wound on a pocket-size, flat plastic block in 100 ft units. The Tru-line Company, 615 Flynn Bldg., Des Moines, Iowa.

Venetian Blinds

A new type of Venetian blind, the *Alum-No Tape*, has recently been made available. Containing no cords or tape, the complete unit attaches to two hooks at the top of any window and snaps into position at the bottom, thus preventing rattle caused by breeze movement. A small rotary knob controls position of the louvers, and a special feature of the blinds is the fact that either top or bottom half may be opened or closed — thereby affording privacy and ventilation at the same time. Sizes are made to fit any window or door, and the unit is easily removed for cleaning. Blinds are available in a wide choice of colors. Alum-No Tape Venetian Blind Corp. P. O. Box 3041, Miami 6, Fla.

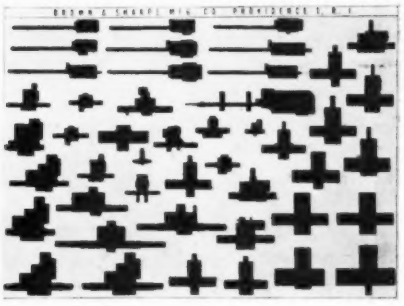
(*Continued on page 268*)

PRODUCTS

(*Continued from page 264*)

Master Planning File For Plant Engineers

Consisting of 5000 ¼ in. scale *Repro-Templets*, this complete, alphabetically-indexed master planning file for plant engineers is produced on 12 by 18 in. film sheets. Templets of frequently-used machine tools and shop equipment will reportedly permit the engineer to reproduce by any commercial method whatever quantity desired of individual templets or groups of templets needed to lay out almost any metal-working plant. The file is mailed, completely packaged, on a priority order basis. Repro-Templets, Inc., Oakmont, Pa.



Planning file contains 5000 templets of machine tools and shop equipment

New Lamp Collection Uses Lastex and Wire

The *Howard Miller Company* has recently introduced a collection of six modern lamps, using panels of bright-hued Lastex and slim stalks of black and white wire. George Nelson is the designer of the lamps.

The new collection accentuates the shade by novel use of Lastex and by employing simple geometric forms. As an added feature, all of the panels are easily removable for washing, according to the manufacturer.

Each lamp is available with a black or a white wire frame. In two, the "overshades" are white; the other four combine white with red, blue, green or yellow. The Howard Miller Clock Company, Zeeland, Mich.

New Door Folds Against Jamb

The new *Pella* wood folding doors are reported to effect a substantial saving in building costs as a result of the wall and floor space saved. A series of wood panels 3⅝ in. wide by ⅜ in. thick, the door is supported by a metal track at the top. The panels are held together by a series of concealed springs which act as hinges.

Available up to 12 ft in height and up to 20 ft in width, the door comes in a packaged unit, which is said to be easily installed. The doors may be had in three standard paint colors, with natural wood finish, unfinished, or with oak, birch or mahogany veneer. Rolscreen Co., Pella, Iowa.

Fluorescent Lighting Fixtures

A new *Snap-Lock Catch*, which permits hinged lens doors on fluorescent lighting fixtures to be easily opened and closed, has recently been developed by a Massachusetts firm. It works on the principle of a cupboard door with a spring latch. No screws or other adjustments are necessary. A gentle fingertip pressure on the protruding trigger is all that is required for simple operation. Litecontrol Corporation, 36 Pleasant St., Watertown 72, Mass.

Made to your order

...in size

...in weight

...in finish

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BUILDING PANELS for curtain wall construction

Now you can specify a single structural wall and surfacing material that *exactly* meets your customers' requirements.

It's Armorply Building Panels!

Custom-made to your order in size, Armorply is available in all of the standard commercial sheet sizes up to 5 x 10½ ft. or even longer. They require no trimming or cutting on the job. They drop into place quickly and easily. They speed up (and save money on) any building job.

In weight, Armorply Building Panels with honeycomb core vary from about 1.5 to 6.0 lbs. per sq. ft., depending on the type of construction and insulating characteristics. They can be obtained in thicknesses from ½ to 4 inches.

Being an interior and exterior wall in one, they make for a great saving in floor space. They take the place of standard masonry walls 12 to 15 inches thick.

In finish, Armorply Panels offer still other advantages. Armorply Panels are *flat*. They can be made in any color to specification. They can be made with any finish ... porcelain-enameled steel, aluminum, plain steel or stainless steel. And they never need painting or other decoration. They save maintenance costs, year in, year out.

Yes, Armorply Building Panels *are made to order* for every modern curtain wall installation. Get all the facts. Mail this coupon ... today.

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Please send descriptive A. I. A. file material on Armorply Building Panels.

Name.....

Company.....

Address.....

City.....Zone.....State.....

LITERATURE

(*Continued from page 208*)

electric stairways and related control systems. Types of control systems are discussed and data on dimensions, capacities and speeds of both passenger and freight elevators are included. Sections on hospital and apartment house elevators point out special problems and factors in planning. Layout drawings are also included for both electric stairways and elevators. 19 pp., illus. Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.*

Automatic Engine Controller

Universal Automatic Engine Controller, Bulletin 649. Brochure describes operation, features and installation procedures for the manufacturer's engine control device. Photographs and dimensions are included. 4 pp., illus. Alexander F. Barron, 53 W. Jackson Blvd., Chicago 4, Ill.

Central Heating Controls

Controls for Central Heating Systems (Circular Series No. G3.2). Booklet describes briefly various controls for fire-burning equipment and heating systems, including coal stokers, gas burners, oil burners, hand-fired furnaces and boilers and panel heating. Location and operation of thermostats is also described. 8 pp., illus. Small Homes Council, University of Illinois, Urbana, Ill.

Wiring Devices For Increased Convenience

Electric Availability Important to Architectural Design. Booklet illustrates how various parts of the house can be made more convenient with a wide range of electrical devices, switches, outlets, receptacles, etc. Typical plans and illustrations of many of the products are included. 15 pp., illus. Arrow-Hart & Hegeman Electric Co., 2302 Laurel St., Hartford 6, Conn.

Recessed Lighting Fixtures

Calculite. Brochure contains information on square, round and recessed ceiling fixtures, describing with text and illustrations the various features. Construction installation details are given along with complete application data. Charts, cross-sections and drawings are included. 15 pp., illus. Lightolier, Inc., 346 Claremont Ave., Jersey City, N. J., Att'n.: Advertising Dept.

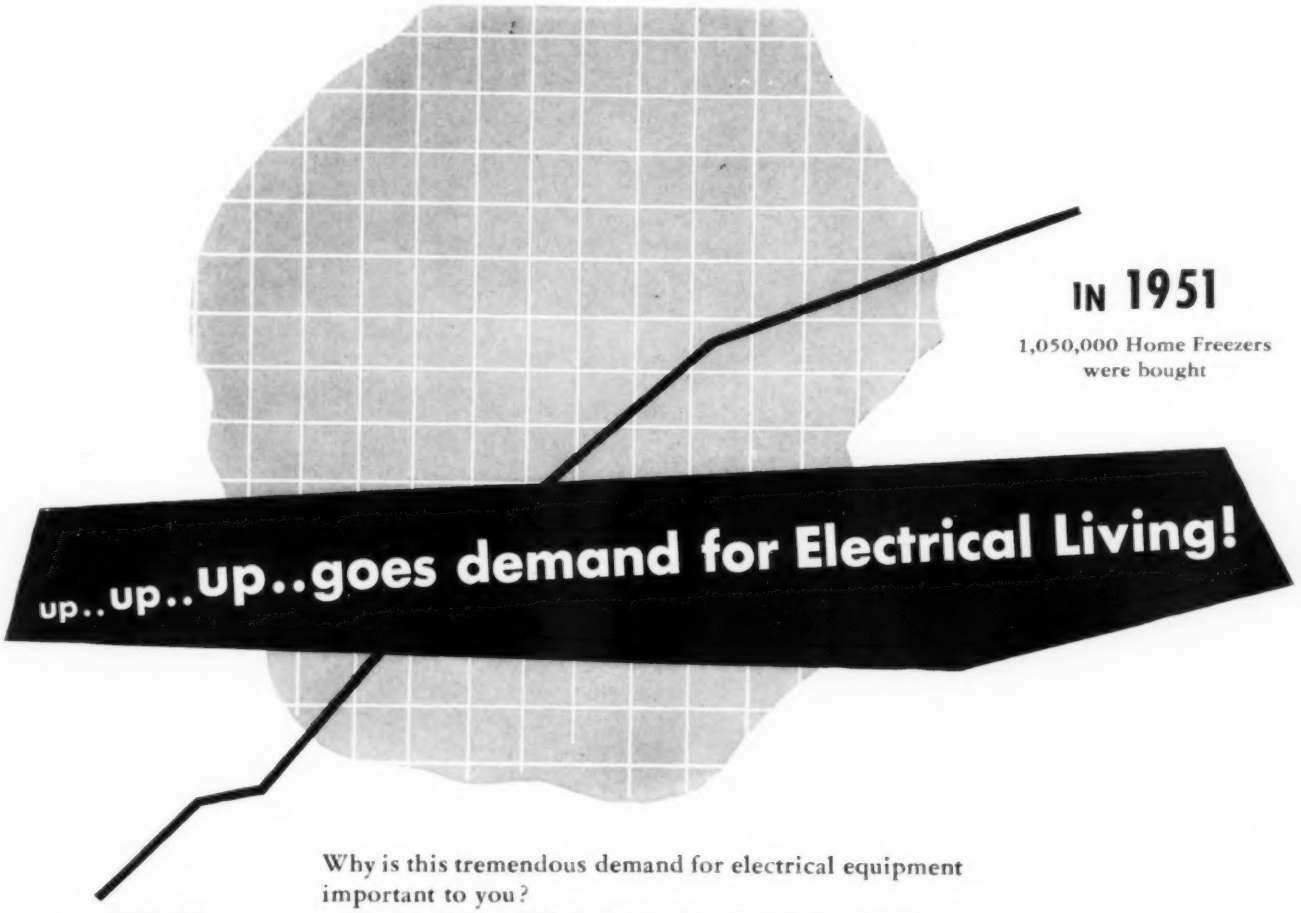
Drapery and Curtain Fabrics

Dura-Décor. These coated Fiberglas drapery and curtain fabrics, used in places of public assembly, are presented in the manufacturer's first full-line catalog. Complete information on the characteristics and properties of the fabrics, actual photographs of the fabrics' uses and large swatches are included in the catalog. 28 pp., illus. Duracote Corporation, 350 North Diamond St., Ravenna, Ohio.

Walnut Veneers

Walnut Veneer Types. Showing the main figure types of American walnut now available in quantity, this booklet contains illustrations of the various figures obtainable by the same and by different methods of cutting. The plates are numbered for specifying the figure type, many of which are shown in a variety of popular finishes. 20 pp., illus. The American Walnut Manufacturers' Association, 666 Lake Shore Drive, Chicago 11, Ill.

(*Continued on page 276*)



Why is this tremendous demand for electrical equipment important to you?

Houses that are *planned electrically* for these modern conveniences have maximum client appeal.

Westinghouse has developed basic design data to help you plan for most advantageous use of space. The Westinghouse line of equipment helps you meet market conditions, while adding "proof of quality" that is widely accepted.

A file of electrical planning material is available for the asking. To get a set, send the coupon below.

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Westinghouse Electric Corporation
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Company _____

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City _____ Zone _____ State _____

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LITERATURE

(*Continued from page 272*)

Kitchen Products Catalog

American-Standard Kitchen Products. Included in this catalog are illustrations and descriptions of the manufacturer's base, wall, utility and under-sink cabinets; maple and vinyl-plastic counter tops; disposers; ventilators; and porcelain enameled steel and cast iron sinks.

Sections on cabinet specifications and accessories, sink moulding strips and fittings, kitchenettes, convertibility and color in the kitchen are also featured. 32 pp., illus. American Radiator & Standard Sanitary Corporation, Pittsburgh 30, Pa.*

Window Shades

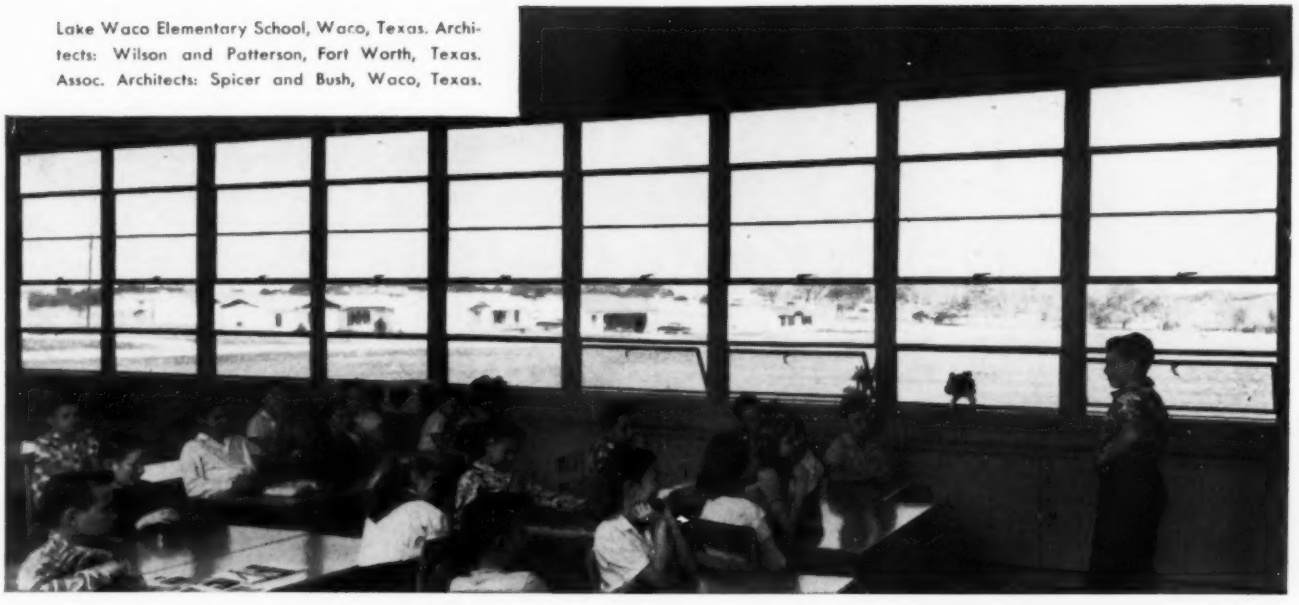
Modern Window Shading. Booklet describes in detail the features of "Tontine," Du Pont's washable window shade, giving complete information on the various types available. Suggestions as to the circumstances under which each type is ordinarily used along with common methods of hanging shades are described and illustrated.

Specifications are also included in the brochure, and a list of the available colors in each type of shade is given. 28 pp., illus. E. I. du Pont de Nemours & Co., Inc., Fabrics Div., Newburgh, N. Y.*

Lighting Fixtures

Lightolier Style Book. Catalog presents in compact and attractive form the complete residential and architectural fixture lines of the manufacturer. Containing 258 different styles — many of them shown in color — the book measures 9 by 12 in. Including such fixture lines as Contemporary Lytecasters, Sculptone fixtures, the Pacemaker group and crystal chandeliers, the catalog also contains light charts for the engineer and architect and several decorating ideas of interest to the homemaker. 72 pp., illus. Lightolier, 346 Claremont Ave., Jersey City 5, N. J.

(*Continued on page 280*)



Lake Waco Elementary School, Waco, Texas. Architects: Wilson and Patterson, Fort Worth, Texas. Assoc. Architects: Spicer and Bush, Waco, Texas.

THIS IS THE GUINEA PIG SCHOOL

In this school, Professor R. L. Biesele, Jr., of Southern Methodist University, completed the latest studies in daylighting of schools.

This material is now available in the new book "How to Get Nature-Quality Light for School Children". Also in this book, brought together under one cover for the first time, are the essential data on quantity and quality of light compiled from Recommended Practice. Photographs of beautiful, new schools all over the country show how architects have achieved the recommended illumination levels with daylight.

This 24-page, lavishly illustrated book also contains weather map, light transmittance chart of all types of glass, condensations from the latest writings by consultants on school design, and other technical material. It is a brief, authoritative and convenient reference which any architect working on school design will want to keep on hand.

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LITERATURE

(*Continued from page 276*)

Planning and Remodeling the Farm House

• (1) *Farm Kitchens and Utility Rooms;* (2) *Farm House Remodeling.* First booklet is divided into four sections. The first section discusses the relation of the work core to the farmstead and to the rest of the house; gives recommended kitchen and utility room sizes; proper location of refrigerator, sink and range; recommended sink and work heights; cabinet dimensions, and other kitchen standards. The second section is concerned with the many storage units which will provide added convenience and efficiency. Diagrams, sketches and floor plans illustrate the various combinations advised. A checklist of suggested kitchen equipment is also given. Section three is concerned with how one might get the most beneficial use out of the storage units, i.e., with extra shelves, etc., and section four is entirely devoted to the utility room — giving proper location and how to plan, considering various work areas, equipment and materials needed. Surface finishes, ventilation, light and wiring information conclude the text. 72 pp., illus.

The second booklet concerns itself with the remodeling of farm houses, considering the advisable extent of remodeling to be done on an existing structure. Before and after floor plans are given, showing interior and exterior designs. Construction problems are discussed — from foundation to roof and insulation to finishing materials. 56 pp., illus. Planning Research Center, School of Architecture, Univ. of Manitoba, Winnepeg, Canada.

• *Your Farmhouse . . . Planning the Kitchen and Workroom.* Booklet contains 16 plans for kitchens and workrooms, with information on basic work areas, and details of construction and design features. Dimensions for all types of equipment are given, and suggestions for floor and wall coverings with descriptions of various types are included. 18 pp., illus. Price 25 cents. Supt. of Documents, U. S. Government Printing Office, Washington 25, D. C.

(*Continued on page 284*)

LITERATURE

(*Continued from page 280*)

Wall Covering and Upholstery Fabric

Gateway to a New Conception in Interior Design. Brochure tells the story of how a new plastic fabric has been put to use in Pittsburgh's new Gateway Center . . . for wall covering and upholstery fabric. Included in the folder are photographs of the business center and of the material, itself. Also shown are colored sketches of the various rooms in which the fabric is used, and blown-up photos point out the various textures and patterns available. 6 pp., illus. L. E. Carpenter, Inc., Empire State Bldg., New York 1, N. Y.

Curtain Walls

• *Stainless Steel Curtain Walls; Progress Report on Methods.* With cutaway drawings and construction details, this brochure illustrates several ways in which stainless steel can be employed in curtain walls. Categories discussed include non-structural facing, structural facing, reinforcing-type facing, combined system with structural insulation and large-size curtain wall panels. Attachment details, window details, joint design and shapes and textures are also included. 22 pp., illus. Allegheny Ludlum Steel Corp., Pittsburgh 22, Pa.*

LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

Morris O. Miller, Engineer, 22 Logan St., Lawrence, Mass.

J. E. Perez, Jr., Architect, Box 1170 Chitré, Rep De Panama.

Evan M. Terry, Architect, Rm. 646, Brown Marx Bldg., Birmingham, Ala.

R. T. St. John, National Cotton Council, P. O. Box 18, Memphis, Tenn.

Brooklyn College Library, Brooklyn 10, N. Y., is interested in receiving literature and samples in connection with an addition to be planned for its present building. Address Building Project, c/o Chief Librarian, Brooklyn College Library, Brooklyn, N. Y.

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Here are the three basic reasons why Architectural Record is preferred by advertisers:

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(3) *cost:* You can reach the largest, most concentrated audience of architects and engineers in the Record at the *lowest cost per page per thousand!*

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Editorial* values are the source of all *advertising* values. We urge you to *find out for yourself* what architectural magazine best serves architects and engineers. *They can tell you.

McDonogh No. 39 Elementary School, New Orleans, first presented to architects and engineers in Architectural Record.
Architects: Freret & Wolf; Goldstein, Parham & Labouisse; Curtis & Davis.
Photographer: Joseph W. Molitor

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Architectural Record

"Workbook of the active architect and engineer"

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NO POST-DEFENSE SLUMP PREDICTED FOR BUILDING

President's Economic Advisers Say Urgent Needs Are Promise of Activity

INEVITABLE EXPANSION of many new industries now in their early stages and the backlog of potential demand in many kinds of "nondefense" building were cited in the midyear report of the President's Council of Economic Advisers as promising continued prosperity in the construction field.

The Council's report found the U. S. economy strong, with no prospect of a serious depression unless the nation fails to take the proper steps. "In an important degree," it commented, "the outlook for investment depends upon how well businessmen respond to their long-range prospects. The overall economic outlook justifies and should evoke a favorable response."

When defense spending tapers off, the construction field will find "a sector of potential demand" in the areas now restricted as not essential to defense: "The sum of our urgent needs for more and better schools, hospitals, roads, public recreational facilities, local water supplies, and land and water conservation and development works exceeds those at the end of World War II," the report comments.

Postponement of many such projects to a time when private construction is at a relatively low level was regarded by the Council as one prop to economic stability in the industry; stimulation of housing and urban redevelopment programs as another, at the same time a means of providing families with suitable housing and preventing "decay of our great cities."

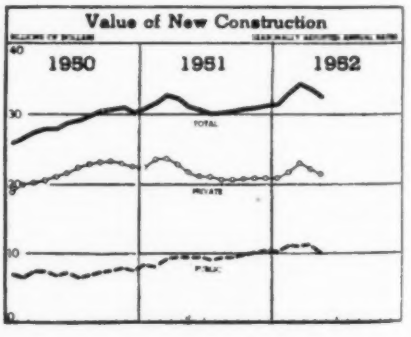
Acceleration of both the slum clearance and low-cost housing programs was urged by the Council, which pointed out that if the full program authorized by the Congress (135,000 low-rent public housing units per year) were carried out, it would involve local construction expenditures of more than $1 billion annually for several years.

AEC GETS $2.9 BILLION FOR EXPANSION IN 1953

Report Monthly Construction Costs Average $100 Million; Two Big Contracts Let

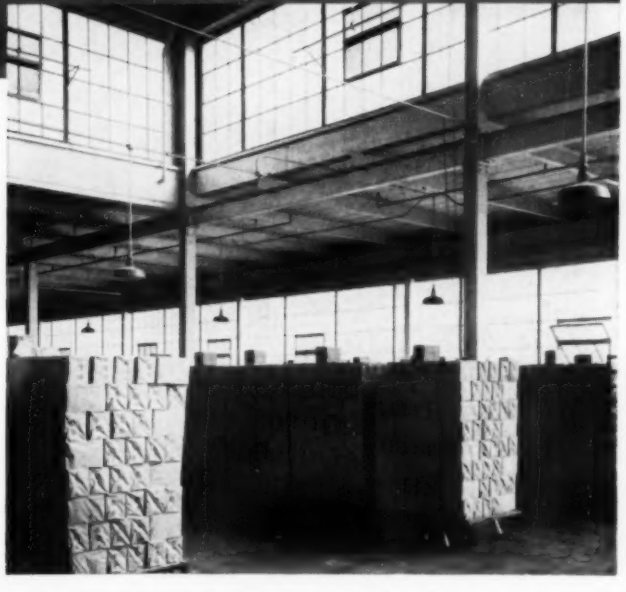
After providing the climactic battle of the 82nd Congress, the Atomic Energy Commission received $2,898,800,000 to

(*Continued on page 292*)



The monthly industry report of the U. S. Department of Commerce presented this comparison of value of new construction

Sunshine's BRIGHT (without GLARE)



COOLITE GLASS Cuts Costs, Improves Efficiency in Sunshine Biscuits Plant

The heat absorbing properties of Coolite glass helps keep interiors of this modern plant cooler even at high noon. Coolite traps and absorbs much of the sun's heat rays, reduces the load on air conditioning equipment, saves on overall operating costs.

Glare Reducing Coolite also filters out annoying glare in work areas and cafeteria. The plant is flooded with softened, filtered light that cuts costly eye fatigue. Employees *feel better, work better,* when they *can see better.*

Approximately 10,000 window lights of Coolite, Heat Absorbing and Glare Reducing Glass are installed in this well-daylighted Sunshine Biscuits plant.

See How COOLITE Can Save Money For Your Clients

In your plans for new industrial buildings or the modernization of existing ones, it will pay you to find out how Coolite can provide increased efficiency and economy. The cool, blue-green color of Coolite adds a modern note to any exterior. Coolite's filtered light boosts employee morale, reduces rejects. See your nearby Mississippi Glass distributor today.

Translucent, light diffusing figured and wired glass by Mississippi is "visioneered" for better daylight illumination. Available in a variety of patterns and surface finishes, all scientifically designed to distribute light to best advantage.

MISSISSIPPI Glass COMPANY

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Send for free Coolite catalog, "Coolite Heat Absorbing and Glare Reducing Glass." Samples on request.

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

WASHINGTON (*Cont. from p. 288*)

continue its gigantic expansion program during fiscal 1953; and two weeks later announced award of construction contracts totaling $923 million for expansion of its gaseous diffusion plants at Oak Ridge, Tenn., and Paducah, Ky. The new facilities are being planned by Giffels and Vallet, Inc. of Detroit — design and supervision of plant construction; and Sargent and Lundy, Inc. of Chicago — design of high voltage power distribution systems and substation.

The vastness of the AEC building program is reflected once again in the figures of its 12th semi-annual report, made public last month. Monthly construction costs for the first five months of the year averaged about $100 million, will rise to an expected peak this month of $128 million, or about five per cent of all U. S. construction. The AEC expansion programs are now employing almost three per cent of all building workers in the U. S.

Not counting the new funds for fiscal 1953, cost of the AEC program undertaken last January 1, to completion, was reported as $2.6 billion.

CIVIL WORKS BILL SKIMPS MONEY FOR NEW PROJECTS

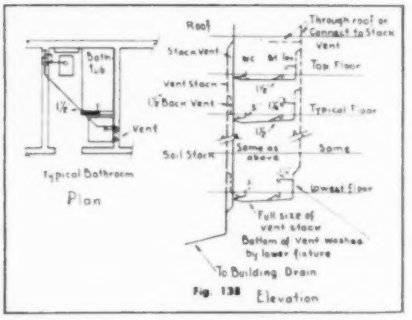
Planning Funds Also Shy — Only $1,255,000 Out of $562 Million Total

Very little money for new work was contained in the $562 million civil works appropriation for fiscal 1953, and planning funds were also at a minimum, with only $1,255,000 allotted.

The bill, another instance of Congressional effort to eliminate as much new work as possible and concentrate on completion of going projects, provided $448,106,600 in construction funds — $243,670,800 for flood control, general and $158,435,800 for the river and harbor program.

(*Continued on page 296*)

PLUMBING CODE ILLUSTRATED



The drawing above, which shows wet venting of a fixture or a bathroom group in a multi-story building, is one of 184 drawings used by Vincent T. Manas to illustrate his new handbook on the National Plumbing Code. It is the first attempt to interpret a national code in illustrations.

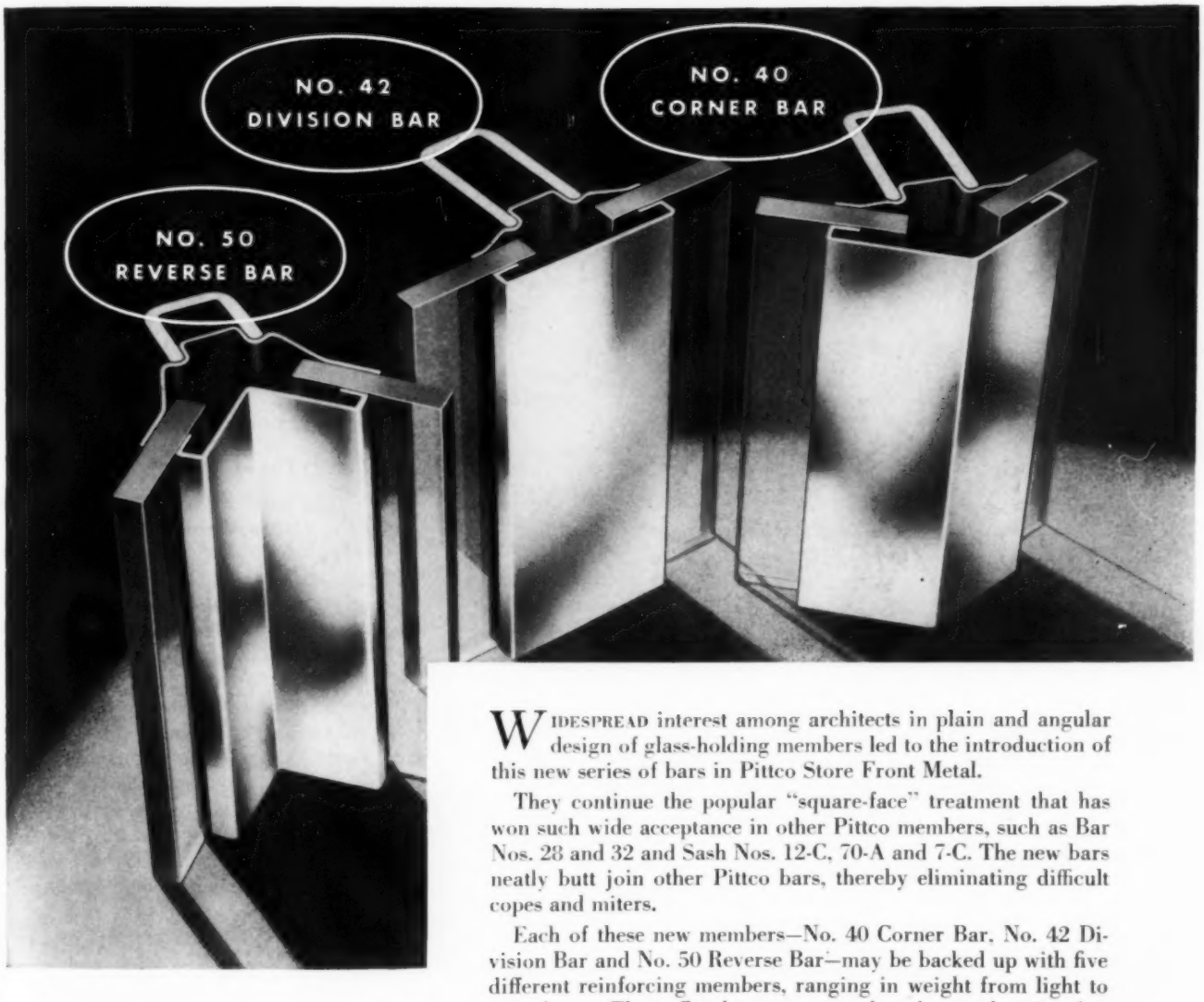
Mr. Manas, executive secretary of the National Plumbing Code Committee, is both a registered professional engineer and a licensed master plumber. For the last 15 years he has been the chief technical official on plumbing for various government agencies.

Copies of *The National Plumbing Code Illustrated* can be obtained for $3.00 a copy from Manas Publications, 4513 Potomac Ave., Washington 7, D. C.

NEW SERIES *of Pittco Bars*

for architects

who want the plain and angular



WIDESPREAD interest among architects in plain and angular design of glass-holding members led to the introduction of this new series of bars in Pittco Store Front Metal.

They continue the popular "square-face" treatment that has won such wide acceptance in other Pittco members, such as Bar Nos. 28 and 32 and Sash Nos. 12-C, 70-A and 7-C. The new bars neatly butt join other Pittco bars, thereby eliminating difficult copes and miters.

Each of these new members—No. 40 Corner Bar, No. 42 Division Bar and No. 50 Reverse Bar—may be backed up with five different reinforcing members, ranging in weight from light to extra heavy. They offer the same strength and ease of setting that characterizes the entire Pittco line.

Ask your Pittco representative to show you this new series of Pittco bars.

PITTCO
STORE FRONT METAL

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PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS

PITTSBURGH PLATE GLASS COMPANY

THE RECORD REPORTS

WASHINGTON

(*Continued from page 292*)

Of the $1,255,000 earmarked for planning, $850,000 is for the general flood control program and $405,000 for rivers and harbors.

ACT FAST ON FUNDS FOR AID TO SCHOOL BUILDING

The Federal Security Agency's Office of Education was acting quickly on applications for Federal financial assistance to school districts in "federally affected" defense areas. In the first three weeks after $195 million appropriated by Congress for the school construction program under Public Law 815 became available, the agency had listed fund reservations totaling $104.5 million for 409 local educational facilities.

Basis: Urgency of Need

The money goes for local school districts whose systems are overtaxed by an influx of Federal workers (civilian or military) and must by law be allotted on the basis of relative urgency of need. A priority system established by the Office of Education and the Community Facilities Service of the Housing and Home Finance Agency, which jointly administer the program, provides that funds allotted be determined first by the percentage of children in the community who are "federally connected" as defined in the law and second by the percentage of children in the school district for whom no minimum standard school facilities exist.

Federal funds certified for payment to local areas are restricted in amount to the cost of minimum facilities required for those children for whom such facilities do not already exist.

State Aids Localities

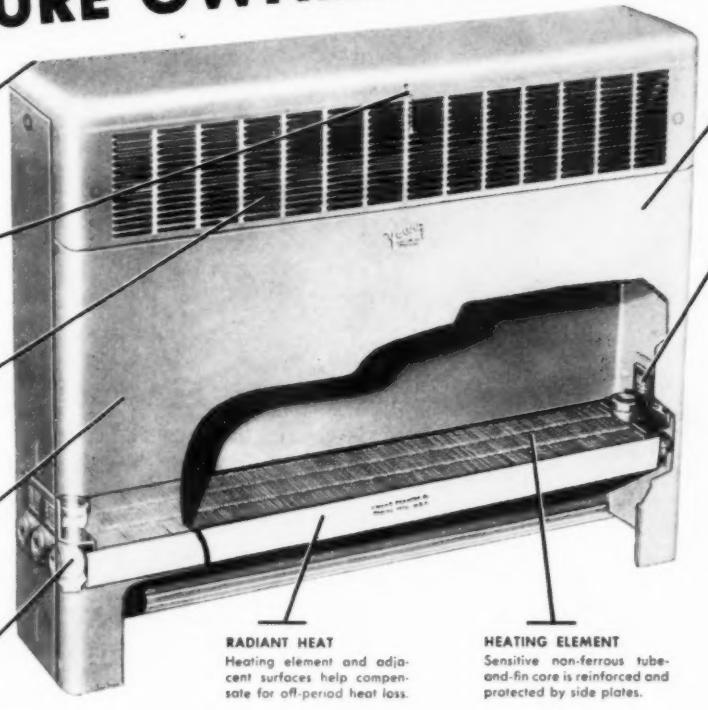
State departments of education designate representatives to assist school districts in preparation of applications for Federal funds. These representatives also work with applicants in developing construction project proposals.

The Community Facilities Service reviews all project applications as to fiscal and engineering aspects and has the responsibility for supervision of the construction and engineering features.

(*Continued on page 300*)

11 REASONS WHY—

YOUNG CONVECTORS ASSURE OWNER SATISFACTION



AIR SEAL
Strips of felt and/or corner gaskets prevent air leaks and resultant wall streaking.

DAMPER CONTROL
Chain control regulates damper and rate of air flow thru cabinet and heating element.

OVER-SIZE GRILLE
Louvers direct air outward and permit abundant heat delivery . . . greater capacity.

MODERN CABINET
Finished in prime coat . . . can be painted to match decor . . . safe, rounded corners.

SIMPLIFIED PIPING
Cabinet knock-outs and header casting design permit piping from top and bottom.

RADIANT HEAT
Heating element and adjacent surfaces help compensate for off-period heat loss.

HEATING ELEMENT
Sensitive non-ferrous tube-and-fin core is reinforced and protected by side plates.

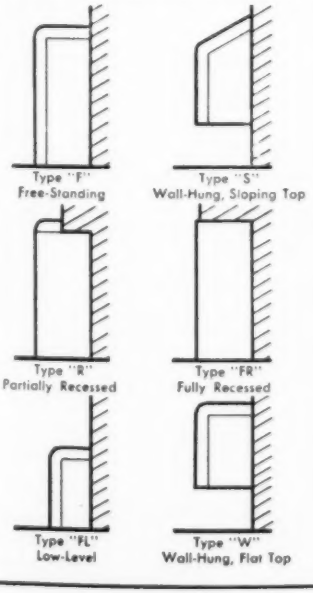
EASY TO CLEAN
Remove screws to release one-piece front panel for seasonal cleaning.

SIMPLIFIED HEATING ELEMENT SUPPORTS
Provide quick installation and pitching adjustments. Hold heating element securely.

PACKAGED FOR PROTECTION
Reinforced, stapled cartons protect convectors. Marked for easy identification.

STANDARD RATINGS
The ratings of Young Convectors have been determined in conformance with Commercial Standard CS 140-47, as developed cooperatively by the trade and the National Bureau of Standards, U. S. Department of Commerce, and the said ratings have been approved by the Convector Rating Committee.

SIX TYPES FOR EVERY INSTALLATION



Young Convector installations can be specified, installed and forgotten. Every care is taken in the engineering, rating and manufacturing of Young Convectors to produce heating elements that provide maximum heat transfer . . . to design cabinets that are attractive and can be painted to harmonize with room interiors. You'll appreciate the elimination of guesswork in Young approved ratings, the ease of installation, the protective packaging which simplifies handling and identification. The six standardized cabinet styles, shown at the left, are for use with any hot water or two-pipe steam system. See your nearest Young Representative, or write for Catalog Nos. 4049 and 4150.

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Heating, Cooling, Air Conditioning Products for Home and Industry.

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(*Continued from page 296*)

CAA'S $19 MILLION GOES FOR IMPROVEMENTS ONLY

The $19,055,855 earmarked by the Civil Aeronautics Administration to be spent in fiscal 1953 on 169 construction or development projects will be used for improvement of existing facilities; no complete field installations are planned.

CAA Administrator Charles F. Horne explains that $9,977,250 of the 1953 total represents Federal money; the other $9,078,605 funds to be spent by state or local sponsors. Only $1,024,667 will be spent in the territories; the balance is slated for work in the states.

Six full years of operation of the program of Federal aid to airports had on June 30 provided $183,145,451 in Federal funds for 2286 projects at 1159 airports; 1680 had been completed, 353 were still under construction.

Projects for 1953 include work on seven intercontinental express airports, 13 intercontinental airports, 15 continental airports, 24 express, 53 trunk, 43 feeder and 14 secondary airports. Largest share of the 1953 money is being spent on the intercontinental class of field; next largest on continental types.

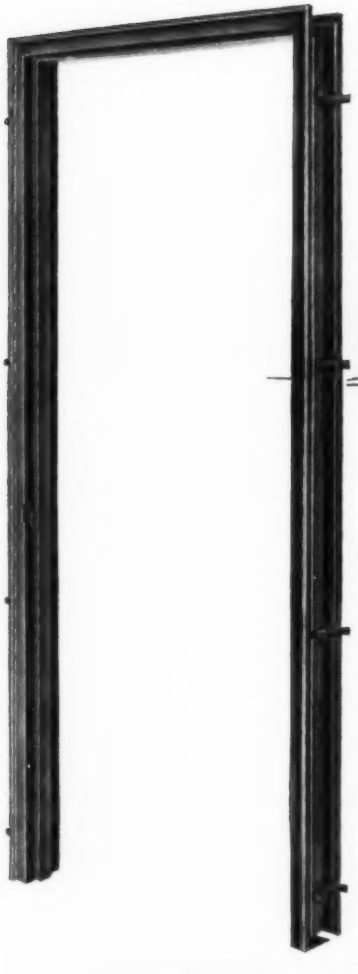
SET UP PROCEDURES FOR HOUSING CREDIT ACTION

The complicated system of determining future housing credit controls set up

(*Continued on page 304*)

U. S. Department of Labor chart shows the picture on starts of new nonfarm dwelling units from 1950 on

from LINCOLN LOGS ...to LEVER HOUSE



Geo. A. Fuller Co.
Builders

Skidmore, Owings
and Merrill
Architects

It's a long way from Lincoln logs to the steel, concrete and glass of Park Avenue's Lever House, America's latest masterpiece of functional design resulting from the collaboration of architects, engineers and technicians, drawing upon the world's most fabulous industrial resources developed in the greatest industrial civilization of them all!

Aetna Steel Products Corporation, suppliers of hollow metal door frames and trim to Lever House, is a pioneer in the the kind of mass production of building materials that makes projects such as Lever House possible. With its background of over 50 years in the industry, it was one of the first mass suppliers of fireproof doors, frames and other hollow metal products.

Aetna is proud of its part in Lever House and of Lever Brothers' recognition of long-established Aetna leadership!

AETNA STEEL PRODUCTS CORPORATION

730 FIFTH AVENUE, NEW YORK 19, NEW YORK

MANUFACTURERS OF STANDARDIZED STEEL DOORS AND FRAMES FOR HOUSING UNITS.
FABRICATORS OF QUALITY HOLLOW METAL PRODUCTS FOR SCHOOLS, HOSPITALS, OFFICE BUILDINGS, ETC.

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(*Continued from page 300*)

in its 1952 amendments to the Defense Production Act by a cautious election-year Congress was bravely reduced to a set of procedures listed in a joint announcement of the Board of Governors of the Federal Reserve System and the Housing and Home Finance Agency.

In sum, the Federal Reserve Board was to receive from the Labor Department's Bureau of Labor Statistics seasonally-adjusted estimates of housing starts for each month beginning June 1. When the estimates showed for three consecutive months a drop below a seasonally-adjusted annual rate of 1,200,000, FRB, with concurrence of HHFA, would announce a period of credit control relaxation to begin not more than a month after termination of the three-month period.

On this basis, it is widely expected that relaxation to the five per cent maximum down payment specified by Congress should be effective by October 1.

ARMY PREPARES TO BUILD SEVEN MODERN HOSPITALS

The Army is set to embark on a hospital building program which will enable it to transfer some 3200 patients from the wooden cantonment-type hospitals of World War II vintage into modern multi-story structures.

Four basic sizes of hospital, all of them expandable without construction of additional clinical or administrative area, are included in the program; seven projects have been announced.

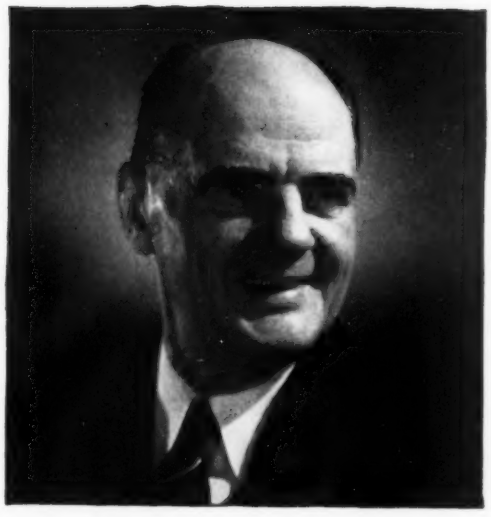
Four of the hospitals, all 500 beds expandable to 1000, will be built at Fort Benning, Ga.; Fort Bragg, N. C.; Fort Knox, Ky.; and Fort Riley, Kan. Others: 200–500 beds, Fort Belvoir, Va.; 200–300 beds, Fort Monmouth, N. J.; 750–1000 beds, Fort Dix, N. J.

Plans are being prepared for the Army Corps of Engineers by York and Sawyer, Architects and Engineers. Each of the buildings planned for 500 beds or more will be nine stories high. Wards for critically ill, operating rooms and clinics will be air conditioned.

ADDENDA

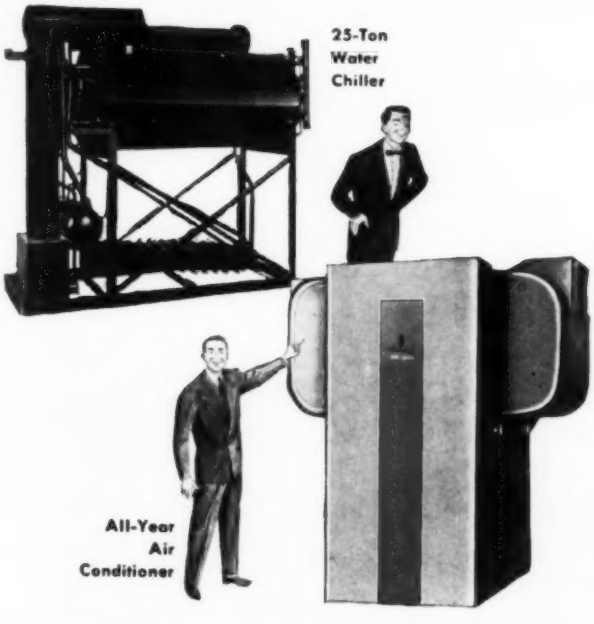
• More than half the industrial expansion program which had received Federal assistance in the form of fast tax

(*Continued on page 308*)



"I can always rely on Servel's amazing dependability when I specify air conditioning for the buildings I design."

No Other Installation Has All The Servel Performance Extras!



SPECIFY SERVEL . . . the air conditioning that offers low operating cost, guaranteed dependability, in residential, commercial or industrial installations.

Servel AIR CONDITIONING

Made by the makers of the famous Servel Refrigerator

SERVEL, INC. • Evansville 20, Indiana

No other air conditioning installation under the sun backs up your recommendation with all these sensational features. Here is the world-famous Servel refrigerating unit that has no compressor—no moving parts, no vibration, no noise. Factory-guaranteed for five full years! It sets a brand new low in maintenance economy, requires no special foundations, can be located anywhere that's most convenient. Uses *water* as a refrigerant . . . operates under a vacuum with no pressure, thus conforming to all building codes. Lighter floor loading and lighter per ton of capacity. Uses *heat* to create *cold* for a complete choice of energy source . . . operates on gas, oil, LP gas, waste heat or steam at any pressure. Specify Servel with confidence—it's the smoothest-operating, most trouble-free unit on the market—custom engineered to do every job best.

Get the facts and you'll choose Servel!
Write for complete information *today*.

Servel, Inc., Dept. AR-9, Evansville 20, Indiana

Gentlemen:
I'm interested in the dependability and low operating cost of Servel Air Conditioning. Send me full details on ☐ Industrial ☐ Commercial Units.

*Name*_____

*Firm*_____

*Address*_____

*City*_____ *Zone*____ *State*_____

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(*Continued from page 304*)

amortization allowances was in place by the end of June, the Defense Production Administration has estimated. It amounted to $9.5 billion in new production and transportation facilities.

• The steel shutdown hadn't reached construction sites in July. New construction expenditures for that month as reported by the U. S. Department of Commerce and the Bureau of Labor Statistics amounted to the record total of $3.1 billion, three per cent over June and seven per cent over July 1951. The private total was almost $2 billion, half of it for new residential building, which was up four per cent from July 1951. An estimated seven-month total of $18 billion was up five per cent over the same period last year.

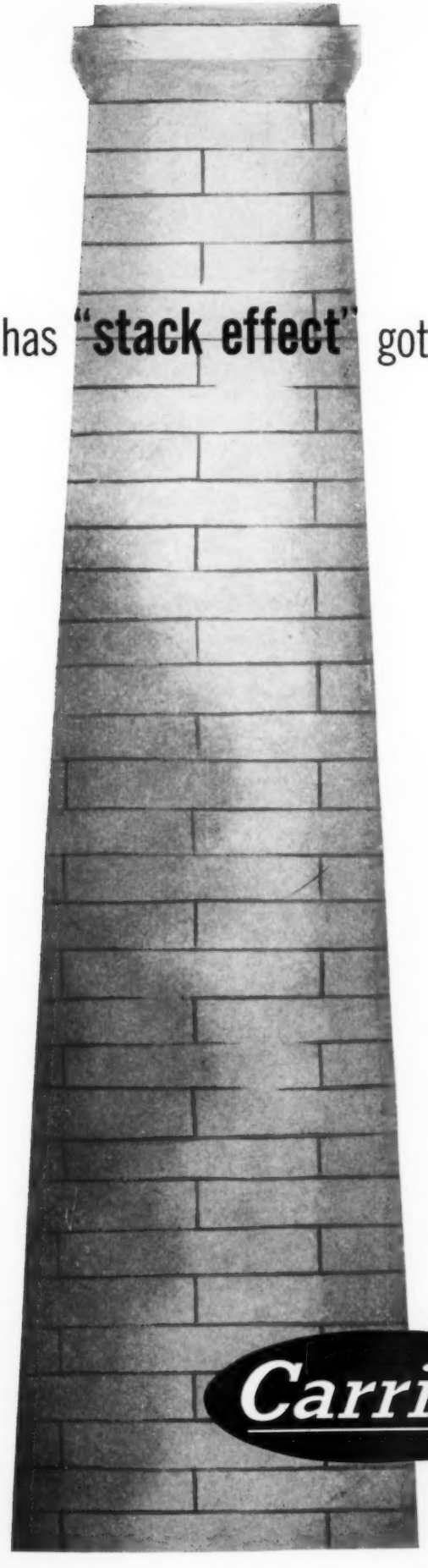
• Hourly union wage scales of construction trades workers advanced 2.6 per cent in the second quarter of this year, according to the Bureau of Labor Statistics quarterly survey of seven major building trades in 85 cities.

• Figures compiled by the National Savings and Loan League suggest savings and loan associations are taking a more active part than heretofore in construction financing. The total of $198 million in construction loans for May of this year represented an all-time high for such loans by savings and loan associations: it was $10 million over the previous high in June 1950 and 28.5 per cent over May 1951. Home mortgage activity for savings and loan groups during May was $586 million, 23 per cent over May 1951.

• Department of Commerce business economists in cooperation with the Committee for Economic Development are conducting a study of potential markets for goods and services which will be available or may be stimulated after the present defense buildup has been completed. Publication of the study, which recalls the Department's wartime study "Markets after the War," is expected in January.

• "Adjunct" facilities like service structures, laundries and mess halls ac-

(*Continued on page 312*)



What has "stack effect" got to do with the winter operation of good air conditioning?

Tall buildings are like chimneys. In winter, the warm air inside is lighter than the cold air outside. So the warm air rises through the building, pulling in cold air through doors, windows and other openings at the lower levels, and creating a tremendous draft — called "stack effect."

This "stack effect" plays hob with air conditioning systems which rely on openings in the outside wall of each room, through which a fan draws outside air across the heating coil.

Rooms at the bottom of the building may be cold and drafty as cold outside air rushes in. And rooms at the top of the building may be hot and stuffy as warm air, attempting to escape, blocks the holes designed for ventilation.

On the other hand, the Carrier Conduit Weathermaster System eliminates "stack effect" because it eliminates the need for holes in the wall. Inside the building, sealed against the variations of the weather, climate is always under complete control. Outside air is brought into a central source, then distributed through slim conduits to individual room units throughout the building.

With the Carrier Conduit Weathermaster System, every room gets air that is already heated, cleaned and humidified. "Stack effect" has no effect. Another reason why the owners and managers of most of today's modern buildings call the Carrier Conduit Weathermaster System their best investment.

Write for our booklet, "Conduit Weathermaster System." Carrier Corporation, Syracuse, New York.

Carrier air conditioning · refrigeration

for 50 years—the people who know air conditioning best

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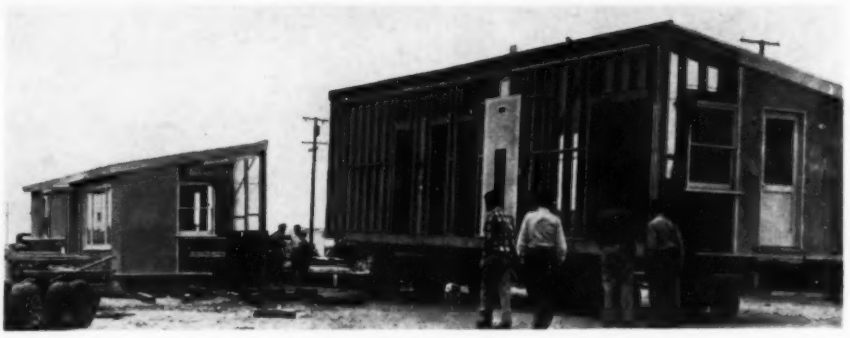
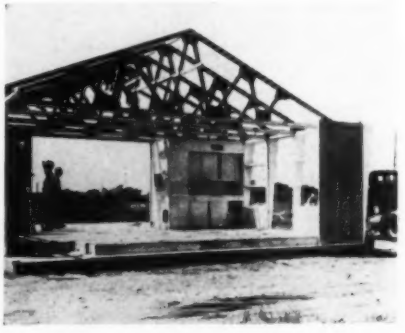
(*Continued from page 308*)

counted for 44 per cent of military construction expenditures in the 17-month period ending June 1, according to a recent breakdown by the Bureau of Labor Statistics. Other figures: troop housing, 18 per cent; air fields and improvements

(*Continued on page 316*)



Four of the demountable houses tested in the recent trial-run program of the Housing and Home Finance Agency are shown above and below in photographs taken during the tests. Trials convinced HHFA Special Adviser Ralph Kaul that demountable housing is practicable for defense areas. Above: "split house," Mobilehome Corporation of America, El Monte, Calif.; below: units by Home Building Corporation, Sedalia, Mo., Pressed Steel Car Company, Chicago, Acorn House Inc., East Acton, Mass.

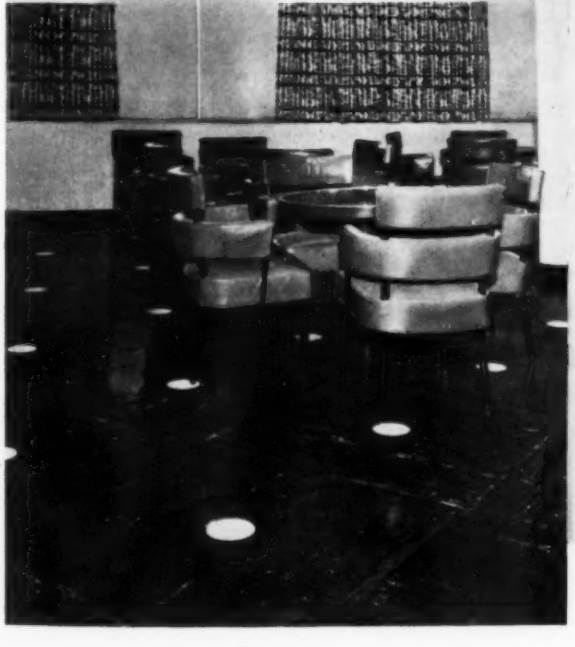


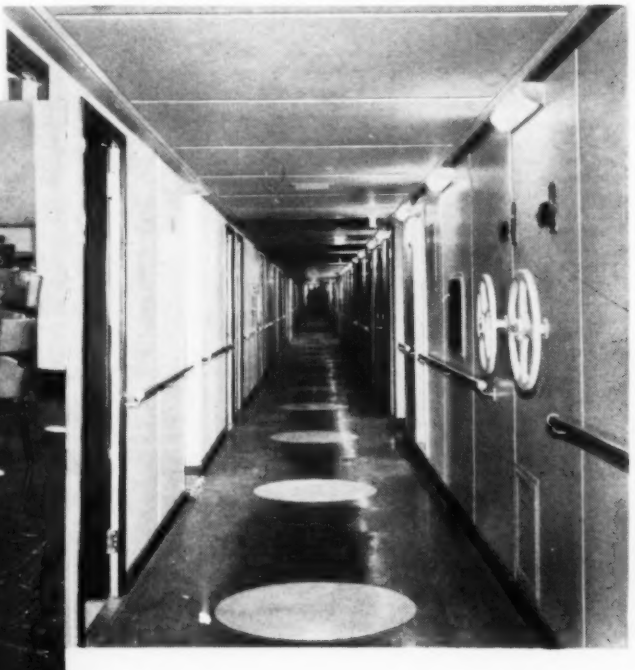
FOUR ACRES of GOODYEAR RUBBER FLOORING on the S.S. UNITED STATES

THERE is no parallel for the 170,000 square feet of Goodyear Rubber Flooring installed on almost 3½ miles of decks, passageways and other passenger areas on the new luxury liner, the S.S. United States. For this is the world's largest ship installation of rubber flooring. If placed in a single area, it would cover some four acres.

Goodyear Rubber Flooring was chosen because of its lasting beauty, durability, ease of maintenance, adaptability, and economy. That has been proved by its years of service on other fine ships—notably the S.S. America, which was placed in passenger service in 1940, pressed into military duty at the outbreak of World War II as the West Point. She carried more than half a million troops, and then converted back into passenger service, with the Goodyear Flooring still beautiful, still serviceable.

When you specify this enduringly lovely flooring for your clients, they too, will enjoy for years its beauty, resilience, comfort and quiet. See your Wingfoot Rubber Flooring dealer for samples and specifications, or write Goodyear, Flooring Department, Akron 16, Ohio.





Goodyear Rubber Flooring in striking patterns runs for miles in passageways and other areas of the new Queen of the Seas, the S.S. United States.

WINGFOOT *Rubber* FLOORING { SHEET and TILE

GOODYEAR

Makers of VINYL · TILE Flooring

Wingfoot—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

THE RECORD REPORTS

(*Continued from page 312*)

to air fields, 14 per cent; industrial, including plant facilities, eight per cent; "all other" (roads, utilities, water and sewer facilities, target ranges and similar types), 18 per cent.

• The Bureau of Labor Statistics also reports that military construction expenditures for the same 17-month period totaled $1649 million, $1019 million during 1951 and $630 million in the first five months of 1952. The five-month outlay this year was 186 per cent over the January-to-June expenditure of 1951.

• The Federal National Mortgage Association is issuing advance commitments and making over-the-counter purchases of FHA-insured and VA-guaranteed mortgages covering defense, military and disaster housing under the $900 million purchasing authority and $1,152,000,000 advance commitment authorization in the Housing Act of 1952. The authority to make advance commitments expires June 30, 1953.

• The antiquated building code of many a U. S. community is the target of one of the Paley Commission's boldest recommendations: that Federal Housing Administration should withhold mortgage insurance for housing construction in areas which have building codes and zoning laws that do not permit use of alternative materials permitted by national standards. The Commission would extend the boycott to include VA-guaranteed loans for home improvements as well as new housing.

• Almost 7500 units of defense housing programmed for private construction in critical defense housing areas had been completed as of July 16, according to a Housing and Home Finance Agency report; more than 23,000 units had been put under construction. Total programmed: 85,931 units in 177 areas; 63,329 rental units, 22,602 sales units.

• Hill-Burton commitments for hospital construction reached an estimated $502,634,963, about one third of the estimated $1,417,757,580 cost of 1827 projects approved in the program by July 1.

The score: 950 projects completed and operating (34,459 beds); 774 (48,468 beds) under construction; 103 (5237 beds) with initial approval.

ON THE CALENDAR

Sept. 8–10: Midyear Board Meeting, Associated General Contractors of America — Greenbrier Hotel, White Sulphur Springs, W. Va.

Sept. 8–12: National Technical Conference, Illuminating Engineering Society — Edgewater Beach Hotel, Chicago.

Sept. 14–21: National Home Week, sponsored by National Association of Home Builders.

Sept. 14–Oct. 5: Chicagoland Home and Home Furnishings Festival, sponsored by Home and Home Furnishings Council of Chicagoland in cooperation with *Chicago Tribune* — Chicago.

Sept. 15–18: Annual convention, American Hospital Association — Philadelphia.

(*Continued on page 320*)

"Hey, I heard of an ocean-going yacht for only $2500!"

"A yacht at any price is too rich for my blood!"

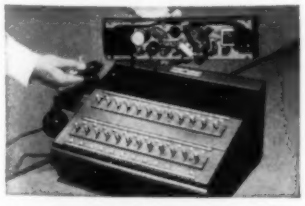
NEW NURSES' CALL STATION

Doubles Capacity in Smaller Unit

In the Edwards Master Station two rooms are served by a single key. Yet each room retains the Edwards privacy feature—only the patient can initiate the call. Twice as many rooms can be served yet the dimensions of the Master Station are substantially smaller.

A new press-to-talk button in the handset frees one hand of the nurse to take notes. The super-sensitive Stromberg-Carlson amplifier built into the station can be removed easily for service.

Maximum patient protection is assured by a supervisory lamp that lights even if a station lamp burns out. An emergency lamp records calls from nursery, toilet or other designated location.



Plug in connections allow built-in amplifier to be removed easily for service. Tubes replaced by simply removing screen ventilating grill at rear of cabinet.

These are a few of many features that make the new Edwards Nurses Call Station the most efficient ever engineered. Write for free bulletin today. Dept. A9, Edwards Company, Inc., Norwalk, Conn.

Yacht or signaling system, cost of upkeep can be a headache easy to contract, difficult to cure. That's another reason why more and more hospital officials today welcome Edwards.

Edwards, they've learned, means *double* economy . . . lower installation costs and more economical upkeep. Edwards systems stand up for years . . . give long trouble-free service with practically no maintenance and repair. That built-in dependability is the result of Edwards 80 years of leadership in signaling. More important still, it's the unseen yet ever present plus that comes with every Edwards product or system . . . your unwritten guaranty of satisfaction.

EDWARDS®

World's Most Reliable Time, Communication and Protection Products For Schools, Hospitals, Industry and Homes.

THE RECORD REPORTS

(*Continued from page 316*)

Sept. 15–20: Third International Symposium on Chemistry of Cement, organized by Building Research Station of Department of Scientific and Industrial Research and Cement and Concrete Association — London.

Sept. 18–20: First annual regional conference, South Atlantic District, American Institute of Architects; theme: Schools in the Southeast — The Atlanta Biltmore, Atlanta, Ga.

Sept. 18–28: Fourth annual National Homefurnishings Show — Grand Central Palace, New York City.

Sept. 29–30: Annual conference and business meeting, Midwest Conference of Building Officials and Inspectors — Drake Hotel, Chicago.

Sept. 24–Nov. 30: Good Design 1952; a large selection of the home furnishings on view in Chicago at the Merchandise Mart, chosen from the January and June exhibitions this year — Museum of Modern Art, 11 West 53rd St., New York City.

Aug. 27–Oct. 13: Two Houses: New Ways to Build; models of Kiesler's "endless" house and the "dome" by Fuller shown with color slides, drawings and photographic enlargements — Museum of Modern Art, 11 W. 53rd St., New York City.

Oct. 1–3: 1952 Convention, Architects Society of Ohio — Cincinnati.

Oct. 2–3: Great Lakes District Seminars, American Institute of Architects — Netherlands Plaza Hotel, Cincinnati.

Oct. 2–4: Annual Convention, New York State Association of Architects — Lake Placid.

Oct. 3–5: Meeting, Northwest Regional Council — Davenport Hotel, Spokane, Wash.

Oct. 9–11: Central States Regional Convention; theme: "Esthetic Evaluation of the Art of Architecture" — Kansas City, Mo.

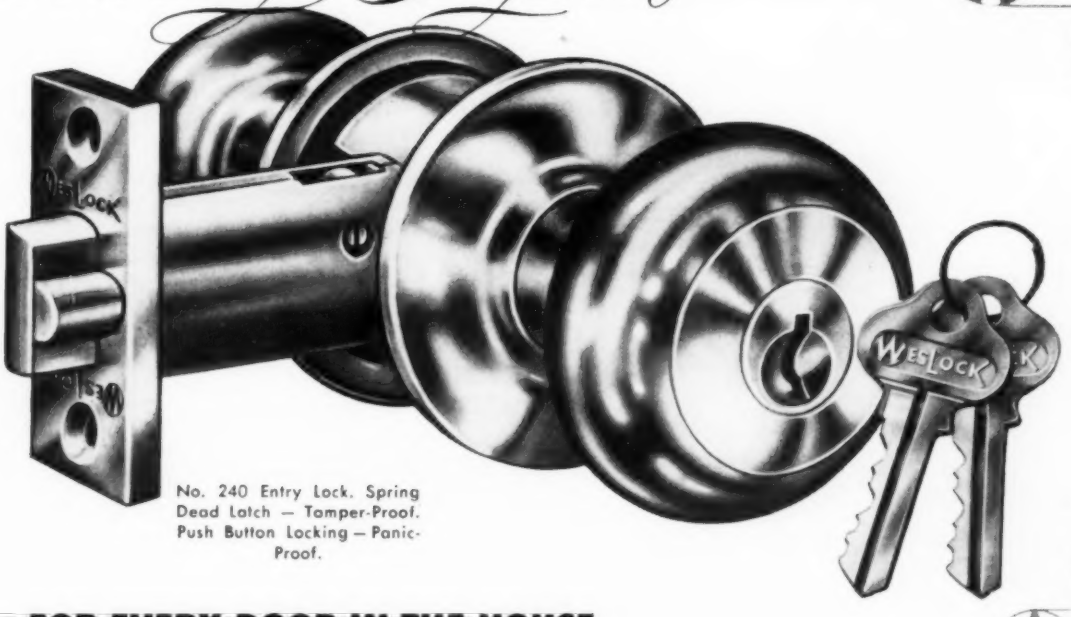
Oct. 9–11: Convention of California Council of Architects and Sierra-Nevada Regional Conference — Yosemite National Park, Calif.

Oct. 10: Third annual Noise Abatement Symposium — Armour Research Foundation, Illinois Institute of Technology, Chicago.

Oct. 11: 20th Century Sculpture, large retrospective exhibition of 50 years of American and European sculpture, opens at Philadelphia Museum of Art. Or-

(*Continued on page 324*)

Smartly Styled



No. 240 Entry Lock. Spring Dead Latch — Tamper-Proof. Push Button Locking — Panic-Proof.

...FOR EVERY DOOR IN THE HOUSE

ACCEPTANCE of WESLOCKS by architects, builders and lending institutions for use on many of the nation's largest building projects is evidence of the outstanding values the line offers. For example, all WESLOCKS have an easy spring latch with a light spring for the bolt and heavy-tension knob return—a feature found only in the most expensive locks. Also, WESLOCKS have key-in-knob construction, 5-pin tumbler locking mechanism for maximum security, split spindle, independent knob operation, factory assembled units, self-aligning feature and a wide choice of handles, ornamental escutcheons and finishes.

Best of all, WESLOCKS are priced to meet the most modest budgets. Truly, they offer you the best hardware value at any price.

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Another WESLOCK *installation.*
Park Forest, Illinois. Contains a total of 3,010 apartments, 5,000 homes, a shopping center and light industrial area...
living units are WESLOCK equipped.
Architects: Loebl, Schlossman & Bennett)Chicago, Ill.
Builder: American Community Builders, Inc. Chicago, Ill.
Hardware Contractor: Schuham Hardware Co., Chicago, Ill.

WESTWOOD MANUFACTURING CO.
P.O. Box 2261, Terminal Annex
Los Angeles 54, California

WESLOCKS

THE RECORD REPORTS

(*Continued from page 320*)

ganized by New York's Museum of Modern Art, the show will open in the Philadelphia Museum of Art, to travel to Chicago Art Institute and to the Museum of Modern Art on April 29, 1953.

Oct. 14–17: 1952 Annual Conference, National Association of Housing Officials — Hotel Statler, Buffalo, N. Y.

Oct. 19–25: VIII Congreso Panamericano de Arquitectos — Mexico City.

Oct. 24–25: Gulf States Regional Council, American Institute of Architects — Jefferson Davis and Whitney Hotels, Montgomery, Ala.

Oct. 20–24: 40th National Safety Congress and Exposition, sponsored by National Safety Council — Chicago.

Oct. 26–28: Semiannual meeting, American Institute of Architects Board of Directors — Grand Hotel, Port Clear, Ala.

Oct. 29–31: Annual Convention, Texas Society of Architects — El Paso.

Nov. 9–Dec. 7: 17th Ceramic National Exhibition, sponsored jointly by Syracuse Museum of Fine Arts, Onondaga Pottery Company of Syracuse and Ferro Corporation of Cleveland — Syracuse Museum of Fine Arts, Syracuse, N. Y.

Nov. 13–15: Convention, Florida Association of Architects — Tallahassee.

Nov. 19: 34th Annual Meeting, American Standards Association — Waldorf-Astoria, New York City.

OFFICE NOTES

Offices Opened

• Joseph Allan, Jr., Architect, has announced the opening of an office at 311 Morris Avenue, Elizabeth 3, N. J.

• Frederick S. Cates, A.I.A., has opened an office at 334 St. Paul Street, Baltimore, Md.

• David B. Liberman, Architect, announces the opening of his office at 605 Walnut Street, Knoxville, Tenn.

• Thomas J. Madden, Jr., has announced the opening of an office for the practice of architecture at 634 Crandon Boulevard, Biscayne Key, Fla.

• Walter L. Norris, Architect, announces the opening of his office at 422 East Pine Avenue, Midland, Tex.

(*Continued on page 328*)

THE RECORD REPORTS

(*Continued from page 324*)

• Ira A. Ramsey, A.I.A., has announced the opening of his new office at 115 Kingston Avenue, Lenoir City, Tenn.

• Sigmund Ross has opened an office for the practice of structural engineering at 144 East 30th Street, New York 16, N. Y.

• Evan M. Terry, Architect, announces the opening of an office at Room 646, Brown Marx Building, Birmingham, Ala.

New Firms, Firm Changes

• Sarkis M. Arkell, A.I.A., announces his association with the firm of Sargent, Webster, Crenshaw & Folley, Architects. He will be in charge of a new office at 311 State Street, Schenectady, N. Y.

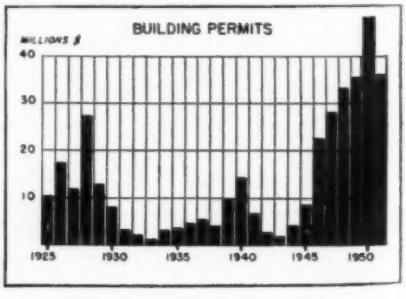
• Robert A. Eyerman, A.I.A., announces that Joseph W. Hoban, Jr., A.I.A., is now associated with him for the practice of architecture. The new firm will be known as Robert A. Eyerman-Joseph W. Hoban Jr., Associate Registered Architects, 54 Public Square, Wilkes-Barre, Pa.

Halsey & Cummings, Architects, Champney Alley at Exchange Street, Charleston, S. C., have announced that William Harleston has become an associate member of the firm.

• Kelly & Gruzen, Architects-Engineers, 80 Fifth Avenue, New York, have an-

(*Continued on page 332*)

BUILDING BOOM IN ATLANTA



The effect on building of the postwar industrial boom in the South is illustrated in this graph from a new promotional brochure about Atlanta published by the Atlanta Chamber of Commerce

AND NOW – 2 PLASTIFUSED FABRIC WALL COVERINGS

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REG. U. S. PAT. OFF.

–for interior walls exposed to average wear

This widely used wall covering is now available in a new collection—unsurpassed in the beauty and range of its colors and decorative effects.

You'll find colors that sparkle in gay, lively accents . . . colors that parade in deep "decorator tones"—colors that soothe in delicate pastel tints. You'll find geometrics—textures—abstracts—florals—plaids—yes, even "juveniles". In short, you'll find a collection to meet your every decorative need—and at a cost within the average budget.

Best of all, you'll find, in FABRON, decoration wedded with long-term durability—positive protection against plaster cracks—unlimited washability—sunfast colors—easy installation—and, of vital importance, certified fire protection.

tested Underwriters' Laboratories, Inc. listed
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TRADE MARK REGISTERED

–for areas subjected to heavier than average abuse

The result of years of research, PERMON provides advantages never before combined in a wall covering. It's really rugged—developed especially for use as a wainscot in such areas as corridors, etc. where walls are subjected to constant abuse. Unusually attractive, too—13 beautiful "un-institutional" colors to choose from.

PERMON is moderate in cost and easy to install . . . requires no highly-trained, hard-to-obtain specialists. And once installed, its unparalleled stability, stain-resistance and washability assure permanent freedom from maintenance problems.

Why not plan on using both PERMON *and* FABRON? Remember—both are made by the *only firm specializing solely in plastifused fabric wall coverings for the institutional field!* May we send you samples and further details on either FABRON or PERMON via the coupon?

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The institutional field's only specialists in plastifused fabric wall coverings.

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Title_____

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AER-62

(*Continued from page 328*)

nounced that George F. Denniston has joined the firm as executive manager.

• John B. Parkin Associates, 717 Church Street, Toronto 5, Ontario, have announced four new associates in the firm: R. V. B. Burgoyne, M.R.A.I.C., director, Sault Ste. Marie, Ont. office; J. E. Mews, mechanical engineer, director, Mechanical Engineering Department; P. T. Mikluchin, structural engineer, director, Structural Engineering Department; and E. Wilbee, mechanical engineer, director, Process Engineering Department.

• Pereira & Luckman, Architects and Engineers, have announced that Ralph B. Austrian has joined the firm.

New Addresses

The following new addresses have been announced:

Hacker & Hacker, Architects, 845 River Road, New Milford, N. J.

Gavin Hadden, Civil Engineer, 1411 Key Drive, Alexandria, Va.

Arthur Heeney, Jr., M.R.A.I.C., 12 Langmuir Crescent, Toronto 9, Ont.

Joseph F. McDonough, Architect, 313 Brook Avenue, North Plainfield, N. J.

William O. Prescott, Architect, 551 Second Street, Brooklyn, N. Y.

Charles Rubinelli, First Lieutenant, Infantry, 0965280, R.R. # 5, Box 251, La Porte, Ind.

AT THE COLLEGES

New Courses Announced

• The School of Architecture of Georgia Institute of Technology is reactivating its four-year undergraduate course in industrial design under the direction of Hin Bredendieck, formerly of the Institute of Design, Chicago.

• Trinity University in San Antonio is offering this fall for the first time a comprehensive course in the business of home building.

The new course, in the Department of Business Administration, is planned to provide specialized training for future home builders — emphasis will be on business problems as well as technical aspects such as construction, land use, site planning, market analysis and merchandising.

The course was planned in consultation with the Professional Training Committee of the National Association of Home Builders and the research division of the Housing and Home Finance Agency. C. W. Smith, director of the Housing Research Foundation of the Southwest Research Institute, acted as general coordinator of the project.

• The University of Chicago and the Art Institute of Chicago will offer, beginning this autumn, a joint program for the Master of Arts degree.

Scholarships, Fellowships

• Establishment of a new scholarship fund of $18,000 for engineering students at Lehigh University by the Philco Corporation has been announced. The grant will provide three scholarships of $1500 each annually for the next four years.

(*Continued on page 334*)

YOU'LL NEVER NEED THESE . . .
WITH Roddiscraft PLYWOOD WALLS

RODDISCRAFT PLYWOOD PANELING PAYS FOR ITSELF

You can tell your clients that they'll never have to PAPER, PAINT or PATCH — when you specify walls paneled with Roddiscraft Hardwood Plywood.

Yes . . . the first cost is practically the last cost with Roddiscraft Hardwood Plywood.

Over a period of ten years or less the average cost of a paneling job will be no more than that of an ordinary plaster job using paper or paint finishes requiring constant maintenance.

Beyond that period, the negligible amount of maintenance needed to preserve a Roddiscraft paneled wall results in real savings to the building owner.

Tell your clients about the economy features of Roddiscraft hardwood plywood paneling. It will mean client satisfaction for many years to come.

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Cambridge 39, Mass. • Charlotte 6, N. C. • Chicago 32, Ill. Cincinnati 2, Ohio • Dallas 10, Texas • Detroit 14, Mich. Houston 10, Texas • Kansas City 3, Kan. • Los Angeles 58, Calif. • Louisville 10, Ky. • Marshfield, Wis. • Miami 38, Fla. Milwaukee 8, Wis. • New Hyde Park, L. I., N. Y. • New York 55, N. Y. • Port Newark 5, N. J. • Philadelphia 34, Pa. St. Louis 16, Mo. • San Antonio 6, Texas • San Francisco 24, Calif. • San Leandro, Calif.

Roddiscraft

RODDIS PLYWOOD CORPORATION

Marshfield, Wisconsin

THE RECORD REPORTS

(*Continued from page 332*)

• A Fellowship for conducting systematic studies of standardization and its applications in science, engineering, production and marketing has been established at the Mellon Institute in Pittsburgh by a grant from the Sarah Mellon Scaife Foundation of Pittsburgh.

Dr. Dickson Reck, a lecturer in business administration at the University of California who has been an adviser to the American Standards Association, will organize and supervise the project as Advisory Fellow.

Appointments

• Thomas I. Parkinson, president of the Equitable Life Assurance Company and a trustee of Columbia University, has accepted the chairmanship of the reconstituted Advisory Board of the university's Institute for Urban Land Use and Housing Studies for a three-year period ending June 30, 1955. Henry Bruère, the previous chairman, resigned at the time of his retirement from business.

The Institute, having completed seven major research projects during its first four years, now plans a variety of studies in such fields as real estate market behavior; the dynamics of urban land use; public housing in the United States; large-scale public and private housing developments. Also contemplated are conferences to discuss the Institute's program and to bring together persons engaged in research and instruction in the general field of urban land use and housing studies.

• The appointment of Dr. Thomas C. Kavanagh as professor of structural engineering and chairman of the department of civil engineering of New York University has been announced by Dean Thorndike Saville. Doctor Kavanagh has been since 1948 at Pennsylvania State College, where he held the post of professor of civil engineering.

Brief Notes

• The School of Architecture of the University of Oklahoma is now officially accredited by the National Architectural Accrediting Board.

• The Department of Landscape Architecture of Michigan State College has been approved by the American Society of Landscape Architects; it is the 12th school in the nation to be accredited by the Society, which is the official accrediting organization for schools giving instruction in the field.

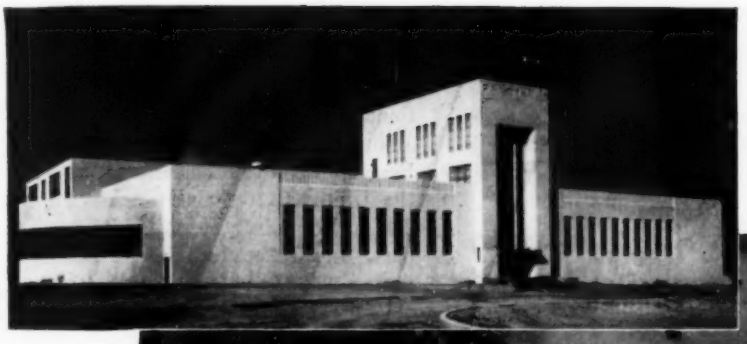
(*Continued on page 336*)

Dr. David B. Steinman (left) of New York is shown receiving an award of merit for distinguished service to engineering from L. L. Dresser, president of the National Society of Professional Engineers

SAVE STEEL

...and Money, too!

on school construction



Frostburg High School
Frostburg, Md.
Architect: R. H. Hitchins
Contractor: J. J. Bendik

Whittier Union High School, Whittier, Calif. Architect: W. H. Harrison. Struct. Engineer: P. E. Jeffers. Contractor: J. K. Thomas.

...build with REINFORCED CONCRETE

Today, more and more schools are being built with reinforced concrete frames. Reinforced concrete requires from 60 to 65% less steel, permitting builders to stretch their steel allotments. Furthermore, reinforced concrete frames save money! In case after case, cost comparisons have proved the basic economy of reinforced concrete.

Reinforced concrete is faster to erect, too, and is inherently firesafe and durable—highly resistant to wind, shock, and quakes. On your next structure it will pay you to *design for reinforced concrete!*

CONCRETE REINFORCING STEEL INSTITUTE • 38 South Dearborn Street, Chicago 3, Illinois

THE RECORD REPORTS

(*Continued from page 334*)

• The third annual National Noise Abatement Symposium will be held October 10 at the Armour Research Foundation of Illinois Institute of Technology.

COMPETITIONS

• *The School Executive*, national educational journal, has announced its second annual competition for "Better School Design," open to architectural firms in the United States and Canada which designed or constructed, in whole or in part, any school or college building during 1952. Awards are certificates.

Entry blanks, which must be submitted and approved by Dec. 15, 1952, may be secured by architects from Walter D. Cocking, editor, *The School Executive*, 470 Fourth Avenue, New York 16, N. Y.

• The Architectural League of New York will hold two competitive Gold Medal exhibitions during the winter of 1952–53 and its usual comprehensive Gold Medal Exhibition of the selected entries next spring.

The first of the competitive exhibitions — for mural decoration, sculpture, design and craftsmanship in native industrial art — will be held December 2–31; deadline for submissions has been made October 20.

Architecture, landscape architecture and engineering will have their competitive exhibition February 3–27; deadline for submissions, December 9.

Louis Skidmore of Skidmore, Owings & Merrill, Architects and Engineers, is chairman of the National Gold Medal Exhibition Committee.

Details and entry slips are available through the League, 115 East 40th Street, New York 16, N. Y.

• The second annual Architectural Citation for use of ceramic sculpture as "an integral part of an architectural plan" is offered as one feature of the *17th Ceramic National*, at the Syracuse, N. Y., Museum of Fine Arts from November 9–December 2.

Entries, in the form of photographs of actual installations, must be sent to the Syracuse museum September 18, 19 and 20, marked "For Architectural Ceramic

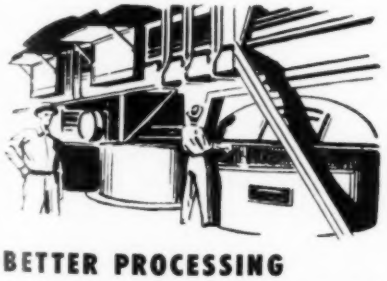
(*Continued on page 338*)

American Blower...a time-honored name in air handling

Columbus, Ohio, has a conveniently located American Blower Branch Office to provide you with data and equipment for air handling. You can reach American Blower in Columbus by calling University 9190. In other cities, consult your phone book.

MORE BUSHELS

Recently, a manufacturer bought several of our type TM Gyrol Fluid Drive units for use on his oil seed presses. Then, he kept close records on the performance of each press for almost a year. Reports show that with the Gyrol Fluid Drives, *the daily capacity of each press was boosted from 1300 to 1650 bushels!* For the advantages of smooth power transmission, shock absorption and overload protection on your machines, call your nearest American Blower Branch Office.



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Why not call on American Blower to help with the air handling assignments in your chemical process work? We've had plenty of firsthand experience. Major chemical producers use American Blower fans and blowers (both standard and special types) in processing chlorine, elemental phosphorus, sulphuric acid, bleach and caustic. Our branch office personnel can often save you time with on-the-spot suggestions.

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Whether your needs are civilian or military, American Blower heating, cooling, drying, air conditioning and air handling equipment contributes toward improving over-all comfort and efficiency. For data, phone or write our nearest branch office.

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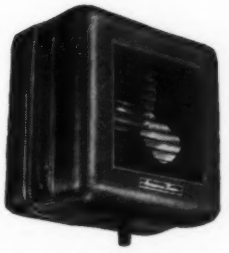
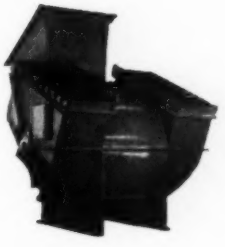
Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

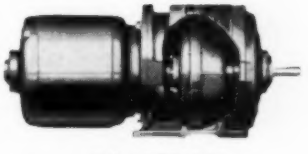


Unit Heaters

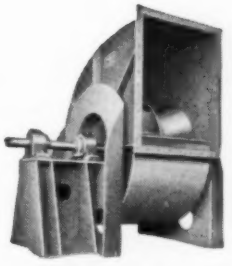


Mechanical Draft Fans

Dust Collectors



Gyrol Fluid Drives



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THE RECORD REPORTS

(*Continued from page 336*)

Sculpture." Blanks will be sent on request.

The exhibition is jointly sponsored by the museum, the Onondago Pottery Company and the Ferro Corporation of Cleveland.

• The *1953 Fleischman International Carpet Design Competition*, held under the auspices of the Detroit Institute of Arts and the Arthur Fleischman Carpet Company, offer awards totaling $2100 for the best new carpet patterns. Designs must be submitted by January 1; details and entry blanks are available from the Arthur Fleischman Carpet Company, 12585 Gratiot Ave., Detroit.

AWARDS

• W. Kent Cooper, 26, of Williamsport, Pa., now with Geer Associates, Birmingham, Mich., planning consultants, has been awarded the $5000 *C. Allen Harlan Scholarship for Architectural Research* established this spring by Mr. Harlan, president of the Harlan Electric Company of Detroit. The Michigan Society of Architects was the sponsor.

• John V. Sheoris, Sunnyside, L. I., N. Y., has received the $2000 *Magnus T. Hopper Fellowship in Hospital Planning* given annually by the Yale University Department of Architecture. Mr. Sheoris, a candidate for the Bachelor of Architecture degree in 1953, will use the fellowship for special studies during his final year at Yale.

• National prizes of $200, $100 and $50 are offered for the best papers in the field of plastics technology in the fifth annual contest of the *Society of Plastics Engineers Inc.* Winning papers will be presented by their authors at the annual technical conference of the Society in Boston next January. Complete contest rules are available from the Society, 409 Security Bank Bldg., Athens, Ohio.

• An award of $500 is offered as the *Matchette Foundation Prize in Aesthetics* for the best article in aesthetics or the philosophy of art by an American author during the academic year 1952–53. The award is offered by the Franklin J. Matchette Foundation, 20 E. 66th St., New York City. Details are obtainable from the Foundation.

(*Continued on page 340*)

Yes—it's a Flexstone* Roof

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The secret of a Johns-Manville Flexstone Built-Up Roof is in the *felts.* They're made of fireproof, rotproof, weatherproof, enduring *asbestos.*

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For your added protection, the Johns-Manville Asbestile* System of Flashing insures proper treatment of all critical areas. Asbestile is a heavy-bodied plastic cement designed for use with asbestos flashing felts to give thorough watertightness. As it sets, Asbestile becomes hard and forms an integral part of the wall itself.

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DECORATIVE FLOORS • MOVABLE WALLS • ETC.

THE RECORD REPORTS

(Continued from page 338)

• The award of the *Plym Fellowship in Architecture* to Charles Erwin King of Belleville, Ill., and of the *Plym Fellowship in Architectural Engineering* to David Keith Pyle of Gibson City, Ill., has been announced by the Board of Trustees of the University of Illinois, the administering body.

The fellowships, valued at $1700 each, are awarded annually to University of Illinois graduates under 35 years of age, for travel in Europe. They were reactivated in 1950–51 after having been suspended in 1942 because of the war.

• The 21st annual *Kate Neal Kinley Fellowship* of $1000 for advanced study in this country or Europe has been awarded to Frederick Theodore Kubitz of Savoy, Ill. The award was established by the late President-Emeritus David Kinley of the University of Illinois in memory of his wife and in recognition of her influence in promoting the fine arts at the university. Applicants must have specialized in music, art, architectural design or historical phases of architecture at the University or another institution of equal standing.

• The *1952 Award of the Concrete Reinforcing Steel Institute* has been presented to Arsham Amirikian, chief designing engineer, Navy Bureau of Yards and Docks, for "the advancement of reinforced concrete through new and improved design concepts."

• The Franklin Institute of the state of Pennsylvania has announced the award

(Continued on page 342)

Arsham Amirikian (left), chief designing engineer, Navy Bureau of Yards and Docks, receiving the 1952 Concrete Reinforcing Steel Institute Award from Prof. H. J. Gilkey, acting award committee chairman

THE RECORD REPORTS

(*Continued from page 340*)

of its *Frank P. Brown Medal* to Fred N. Severud of New York, senior partner in the firm of Severud-Elstad-Kruger, Consulting Engineers.

Fred N. Severud

• Francis Henry Taylor, director of the Metropolitan Museum of Art in New York, has been elected an honorary associate of the *New York Chapter of the American Institute of Architects* "in recognition of his public service in stimulating a broader appreciation of the fine arts during his past 12 years at the Metropolitan Museum."

• Robert P. Madison, a graduate of the School of Architecture at Western Reserve University in Cleveland, now teaching architecture at Howard University in Washington, D. C., is the first Negro to be awarded a *Fulbright Scholarship in Architecture* for study abroad. He will sail this month for Paris to spend a year at the National Higher School of Fine Arts.

• The *Brooklyn Architects Foundation* has announced the 1952 winners of its five $500 scholarships awarded annually for architectural study. The five are Irving B. Elman, who will study at Massachusetts Institute of Technology; and Miss Laurie Mutchnik, Sidney Paul, Frank Eliseo and Alan L. Aaron, who will all enter Pratt Institute.

• Announcement has been made of the second national *Industrial Designers'*

(*Continued on page 344*)

THE RECORD REPORTS

(*Continued from page 342*)

Institute Awards for "noteworthy and fresh approach to design and function, combined with a practical use of appropriate materials in a product that is mass produced and nationally distributed." Awards were presented to Donald L. McFarland, for his design of the A-1 All Purpose Fan for the General Electric Company; and Henry P. Glass, for his design of the Swing-Line Contemporary Juvenile Furniture Group for the Fleetwood Furniture Corporation.

• H. H. Magdsick of the General Electric Company, Nela Park, Cleveland, has been named to receive the *1952 Gold Medal of the Illuminating Engineering Society.*

• Dr. David B. Steinman of New York City, builder of bridges on five continents, has received the second award ever given by the *National Society of Professional Engineers* for distinguished services to the engineering profession. Herbert Hoover received the first award in 1949.

ELECTIONS, APPOINTMENTS

• Charles E. Firestone of Canton, Ohio, is the new president of the *National Council of Architectural Registration Boards.* Other officers: first vice president — Fred L. Markham, Provo, Utah; second vice president — Bartlett Cocke, San Antonio; third vice president — Edgar H. Berners, Green Bay, Wis.; secretary-treasurer — William L. Perkins, Chariton, Iowa. Retiring President Roger C. Kinchoff was named a director.

• Ralph C. Kempton of Columbus, Ohio, has succeeded Walter J. Dixon of Mitchell, S. D., as president of the *Society of Architectural Examiners.*

• *Indiana Chapter of the American Institute of Architects* has elected Karl Schwarz as president; Carol Beeson, first vice president; Edward James, second vice president; W. C. Wright, secretary; R. F. Daggett Jr., treasurer; David Burns and Eugene Hamilton, directors. Allison Vrydagh and Gerald Brubaker continue on the Board of Directors.

(*Continued on page 346*)

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• Philip Will Jr. heads the *Chicago Chapter, A.I.A.* Other officers: first vice president — Albert F. Heino; second vice president — Richard M. Bennett; secretary — Lee C. Mielke; treasurer — James A. Wares; director (four years) — R. Rea Esgar.

• William Paul Fox of Chicago has been elected president of the *Illinois Society of Architects*. Also named as officers were: Benjamin F. Olson, Chicago — first vice president; A. Reyner Eastman, Rockford — second vice president; Virgil E. Gustafson, Chicago — treasurer; Alfred E. Schimek, La Grange — secretary; Gerald L. Palmer, Chicago — financial secretary; and F. M. Bernham, Chicago, and T. Clifford Noonan, Wilmette — directors for three years.

• New officers of the *Michigan Engineering Society* have been elected as follows: president — Sewell H. Downs, Kalamazoo; vice president — William N. Kitchen, Battle Creek; secretary — Joseph B. Jewell, Pontiac; treasurer — Samuel D. Porter, Ann Arbor; director-at-large — D. Bradford Apted, Grand Rapids.

• John J. Ahern, director of the Department of Fire Protection and Safety Engineering of the Illinois Institute of Technology, has been elected president of the *Society of Fire Protection Engineers*. Other officers: first vice president — John A. Neale, New York City; second vice president — Elmer F. Reske, Chicago; secretary and treasurer — Robert S. Moulton, Boston.

• Col. David W. Heiman, who has been serving as chief of the Engineer Supply Control Office, Office of the Chief of Engineers, St. Louis, has been appointed director of the *Munitions Board Cataloging Agency*.

• New *District Engineers* for Army Corps of Engineers district offices throughout the country recently appointed include the following: Col. Ellis E. Wilhoyt, *Savannah;* Col. Gilbert M. Dorland, *Nashville;* Col. H. R. Hallock, *Fort Worth;* Col. Aldo H. Bagnulo, *St. Paul;* Col. Henry Walsh, *San Francisco;* Col. Norman A. Matthias, *Seattle;* Lt. Col. Erland A. Tillman, *Fort Peck, Mont.*

• Arthur J. Benline, Manhattan superintendent of the Department of Housing and Buildings, has been appointed technical director of the *New York State Building Code Commission*. He is a licensed architect and engineer. Mr. Benline succeeds Albert P. Backhaus, who has been serving as technical director of the commission on leave from his principal position of principal building engineer of the state of Maryland.

ANNUAL CONFERENCE HELD BY BRITISH ARCHITECTS

Tours of Edinburgh for Them, Only Two Major "Papers" — "Bleak" Architecture Hit

Nearly 800 members of the Royal Institute of British Architects attended this year's annual conference in Edinburgh. The dates — June 25–28 — almost coincided with those of the annual convention of the American Institute of

(*Continued on page 348*)

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Architects; and the report of the event in *The Architects' Journal* certainly sounds some familiar notes; the orchestration, however, is thoroughly British.

It all began with an informal reception on Wednesday evening — and those who arrived early enough in the day had been able to catch a glimpse of the Queen as she drove from the station to the Palace of Holyroodhouse, where she was in residence for the next five days (the *Journal's* candids include a photo of the Royal car and welcoming throngs).

There were registration "medals" and books of tour tickets to be picked up before the first session. There was, too, an envelope to contain all these things and many others, including the conference "programme" — an item which would probably make the A.I.A. program look pretty utilitarian, including as it did, according to the *Journal* report, "two blank pages for autographs, a miscaptioned photograph of Crail harbor and two pages of quotes from Sir Walter Scott."

The garden party late in the afternoon of the first day of the conference was held at Lauriston Castle, "a sixteenth century baronial building with some nineteenth century additions" — this event might roughly (allowing for some architectural variations!) double for the A.I.A. cocktail party at The Cloisters, except for the *Journal's* comment: "There being no host present, and good manners preventing an immediate rush for the tea tent, there is always a slightly indecisive air about this form of party."

The tours to points of interest were numerous — on the second day three "whole-day" tours were scheduled and the *Journal* reports with regret that barely 200 (of the nearly 800 registered) were present to hear the major paper of that session, described as an excellent paper on "The Architect's Contribution to Housing in 1952" by F. L. Womersley, Borough Architect and Town Planning Officer for Northampton.

The only other paper concerned with architecture was given following the welcoming addresses of the "inaugural session" and an address by R.I.B.A. President A. Graham Henderson and contained what the *Journal* describes as a "startling and regrettable attack on the author's fellow architects in central government offices."

The speaker, F. Steel Maitland, referred bitterly to the "temporary prefabricated substandard houses" intended to have a 10-year emergency use and now appearing to be far from temporary. The "permanent nontraditional house" which is the present approach to the housing problem seemed to Mr. Maitland no improvement, and he voiced a not unfamiliar lament:

"I suppose in the end it is more important to have houses of any sort than to have houses of decent design, though I never could see why it is not possible to have both. In my own view — and of course it is only a personal view — standards of design have deteriorated; the architect has allowed himself to be dominated by the engineer; he has become the slave, not the master, of present-day materials. He has been frustrated, thwarted and dictated to now for many years by these theoretical and academic young men ensconced in the architectural departments of the various ministries, whose knowledge of design is limited by the dictates of their admin-

(*Continued on page 350*)

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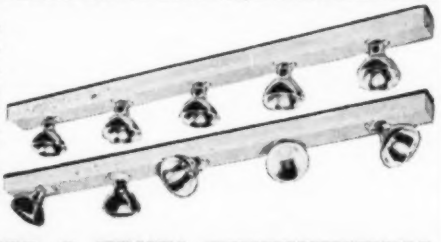

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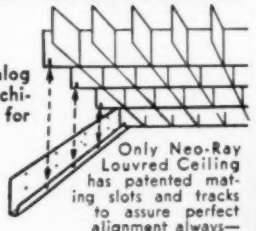

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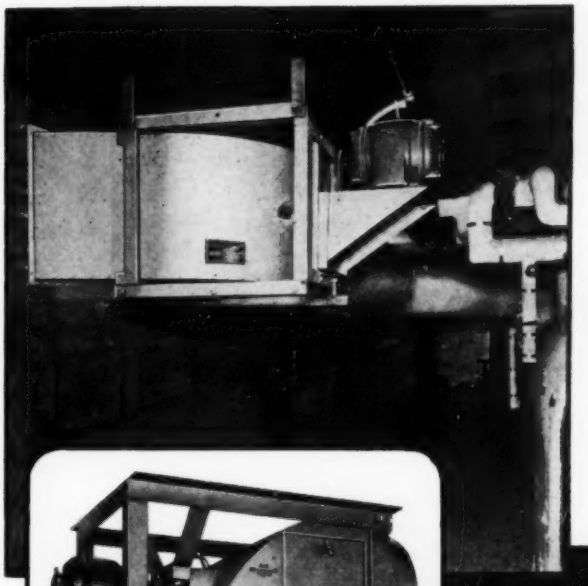
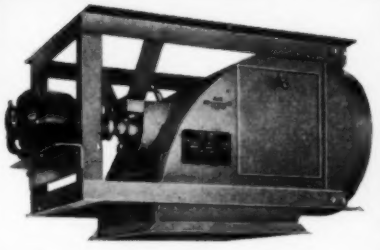
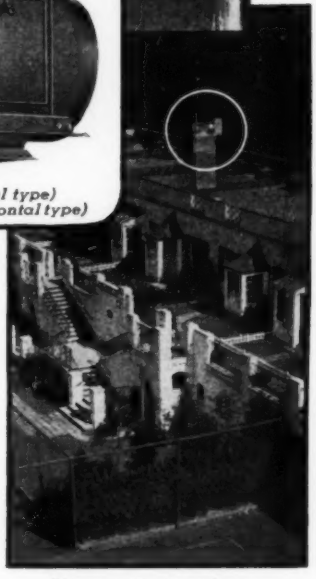




Wing Draft Inducer (vertical type) (Photograph above shows horizontal type)



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(*Continued from page 348*)

istrative superiors and whose practical knowedge is negligible. Scarcity has dictated a bleak and joyless architecture that is accepted not as something to be overcome but as the standard to be attained, the fashion to be followed. For my own part I am an unrepentant traditionalist; but when I look at what now goes by the name of 'traditional' I sometimes wonder, am I?"

OBITUARY

WILLIAM WARD WATKIN, first and only head of the architectural department of Rice Institute, Houston, and author of the ARCHITECTURAL RECORD book *Planning and Building the Modern Church*, died June 24 in Houston.

Mr. Watkin, who received his B.S. in architecture from the University of Pennsylvania in 1908, was associated with the architectural firm of Cram, Goodhue & Ferguson of Boston, architects for Rice Institute, for two years. He went to Houston in 1910 to supervise construction of the Rice administration building and remained there permanently.

A Fellow of the American Institute of Architects, Mr. Watkin was architect for a number of Rice Institute buildings, for Trinity Episcopal Church, Palmer Memorial Chapel, the recent Golding Chapel of Christ Church Cathedral, the recent Central Church of Christ, all in Houston, and St. Mark's Episcopal Church in Beaumont. He was consulting architect for such buildings as Texas Tech College at Lubbock, the Fondren Library at Rice Institute, Abercrombie Engineering Laboratory at Rice Institute and the new Methodist Hospital in Houston.

In addition to the recent book on churches, published in 1951, Mr. Watkin was the author of *The Church of Tomorrow*, published in 1935.

FRANCIS Y. JOANNES, designer of the Department of Justice Building in Washington, D. C., died June 21 in Branford, Conn., after a long illness. He was 76 years old.

A graduate of the Cornell University School of Architecture and of the Ecole des Beaux Arts in Paris, Mr. Joannes worked for several architectural firms before establishing his own office in New York. He was a Fellow of the American Institute of Architects.

Mr. Joannes was the architect for the Young Women's Christian Association Building in New York; the Springfield, Mo., Medical Center; the Calco Chemical Company Plant in Bound Brook, N. J.; the New York State Hospital for Defective Delinquents; the Toronto Union Station; and the Halifax Ocean Terminals, among many other projects.

JOHN H. RANKIN, 83-year-old "dean" of Philadelphia architects, died June 21 at his home. He was a graduate of the Massachusetts Institute of Technology and a Fellow of the American Institute of Architects.

Mr. Rankin had practiced from 1891 to June 1947, when he retired as a member of the firm of Rankin, Kellogg & Doe. His firm designed many public buildings, including the Provident Trust Company, the *Inquirer* Building and the

(*Continued on page 352*)

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United States Marine Corps Building in Philadelphia; the courthouse buildings in Camden, N. J., and Cincinnati; and the courthouse annex in Norristown, Pa.

R. E. LEE TAYLOR, 70, of the Baltimore architectural firm of Taylor & Fisher, died June 23 after an illness of several months. A Fellow of the American Institute of Architects, Mr. Taylor was a member of the Board of Review of the Williamsburg, Va., Restoration project.

Mr. Taylor was a graduate of the University of Virginia and Massachusetts Institute of Technology. He was the son of Gen. Walter Herron Taylor, adjutant general to Gen. Robert E. Lee, for whom he was named.

Mr. Taylor's firm designed the Mathieson Building, formerly the Baltimore Trust Building, the largest building in Philadelphia, among many others.

HARRY ELLSWORTH CLIFFORD, 86, Gordon McKay Emeritus Professor of Electrical Engineering at Harvard University and a former dean of the Graduate School of Engineering at Harvard, died July 7.

Mr. Clifford was editor of a series of electrical engineering textbooks which have become standard works in the field and had been adviser to many communities on the installation of electric lights. He taught at the Massachusetts Institute of Technology for several years before his appointment to the McKay chair at Harvard in 1904. He became dean of the Graduate School of Engineering in 1930 and retired six years later, but remained active as an editor and consultant.

DR. T. KENNARD THOMSON, engineer and inventor, died July 1 at the age of 88 at his home in Yonkers, N. Y.

Doctor Thomson, who remained active as a consulting engineer in New York until his death, was a lifelong advocate of projects to enlarge Manhattan by filling in the Upper Bay, to move the East River and to build three concrete riverbeds to help drain the Mississippi Valley.

Doctor Thomson was an authority on foundations and was associated with the construction of more than 50 major buildings and more than 200 bridges. His scheme for enlarging Manhattan, however, received more public notice than any of his executed projects.

The plan, which Doctor Thomson estimated would cost $750,000,000 and yield in reclaimed land $3 billion to $5 billion, envisioned fencing in the bay area with huge caissons. Part of the enclosed area would be filled by dredges and part of it would be pumped dry to provide ready-made foundations for a super-city. Channels were to remain between new areas and the present shores of Staten Island and New Jersey.

CORRECTION

In the advertisement on page 261 of the July 1952 issue of ARCHITECTURAL RECORD, the symbol SCR was incorrectly identified as "Reg. Trade-Mark Structural Clay Products Institute." The Reg. Trade-Mark should read "Structural Clay Products Research Foundation."

(*More news on page 356*)

EMPLOYMENT OPPORTUNITIES AVAILABLE

Advertising Rates on request

POSITIONS OPEN

WANTED — Experienced architectural man between the ages of 35 and 45 capable of leadership through experience. Excellent opportunity for right man in Southern location. Must be strong in at least one of following phases: design, construction, or specifications. Give complete details in first letter. Box 577, *Architectural Record*, 119 W. 40th St., New York 18.

WANTED — Architectural Draftsman, good all around man with experience on commercial and industrial structures for progressive office on Eastern Seaboard. In reply give full experience outline, salary expected and when available. Box 578, *Architectural Record*, 119 W. 40th St., New York 18.

ARCHITECT — For large chain organization, East Coast, permanent, interesting work; high level standing and salary for qualified individual. Must have experience in architectural planning and interior decorating of hotel dining rooms, should be registered architect in Washington, D. C., Virginia, Maryland and Pennsylvania. Write giving academic training, qualifications and experience to: P. O. Box 3133, Columbia Heights Station, Washington, D. C.

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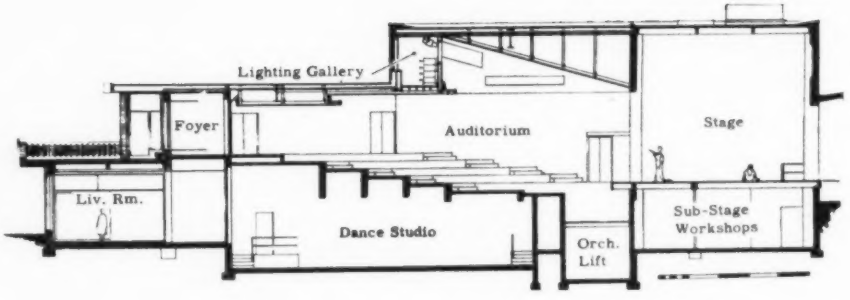
ARCHITECT — German, 34, with experience in Switzerland, Italy and South America, speaking English, Spanish, French and German is interested in connection with American firm in the U. S. or South America as a designer or supervising architect. Box 579, *Architectural Record*, 119 W. 40th St., New York 18.

ARCHITECT — Reg. N. Y. and N. J., age 31, varied experience, seeks responsible position in Northern New Jersey or New York City. Available November. Box 580, *Architectural Record*, 119 W. 40th St., New York 18.

(*Continued from page 26*)

for expanded seating, or to stage level, increasing the total stage area. This lift can also be used to transport heavy scenery from the basement to the stage. An opening in the rear of the stage permits it to serve in addition for outdoor theatricals in warm weather.



Cross-section diagram of building indicates compact planning. Note variance in depth of lower level

The program for the building was in so many ways dictated by the nature of the college itself that any appraisal must take this factor into account. The comparative smallness of the institution and the resultant necessity for multi-purpose provisions in the planning are obvious enough. But the curriculum of Sarah Lawrence was a shaping influence as well, for the college was one of the first, and is still one of the few, to include a full program of creative and performing arts in its curriculum. Here, the arts are part of the educational program, not just extra-curricular activities. The building reflects this emphasis not only in its overall program but in numerous details, such as the placing of the lighting gallery in the auditorium toward the rear, where students can observe the effects they create, rather than backstage as in commercial theaters.

Construction is fireproof. The building is framed with reinforced concrete, steel being used only in the girders which span the auditorium at its widest point. Most of the floor and roof are also of reinforced concrete. Interior walls and partitions are of lightweight concrete blocks, plaster or waterproof cement. The exterior is finished with painted brick.

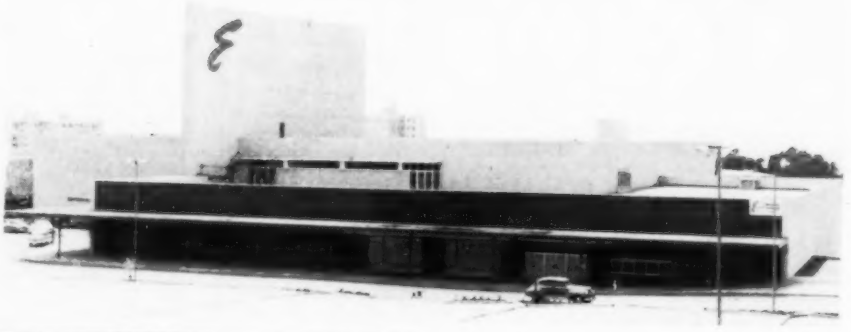
(*News continued on page 356*)

(*Continued from page 354*)

NINTH BUILDING OPENED IN NEW SHOPPING CENTER

The most recently completed building in the new Stonestown shopping center near San Francisco, a large structure for a branch of the Emporium department store, was recently opened.

The center, designed in its entirety by Welton Becket and Associates, will form the commercial area of the Stonestown development, which occupies 65 acres, including 25 acres of residential areas, landscaped gardens and playgrounds.



Department store, latest completed structure in West Coast shopping center, is planned on three levels

Parking: Unit Sale Rating

The shopping center itself occupies 40 acres and provides parking space for 2600 cars. The planning of parking areas was predicated on the "unit sale" rating of surrounding shops, so that type as well as size of the stores helps determine the number of cars to be accommodated. This system was adopted as the result of a special parking study conducted by the architects in collaboration with the City Planning Commission of San Francisco.

Medical Building Included

So far, nine buildings in the center have been finished, with three more scheduled for later completion. Besides the Emporium, major buildings include a five-story medical building, another department store, several smaller specialty shops, a large supermarket and drug store, a restaurant, two banks, office buildings and miscellaneous shops along a central mall. In all, more than 75 commercial enterprises will be housed in the area. The medical building provides office space for 65 doctors and dentists.

When completed, the center will be one of the largest in the West. It will serve a community of more than 300,000 people living within a four-mile radius, and will cost approximately $30,000,000 to build. It will be served by bus and street car lines, for which it will be a terminus. A tunnel is provided underneath the mall for commercial trucks servicing the stores.

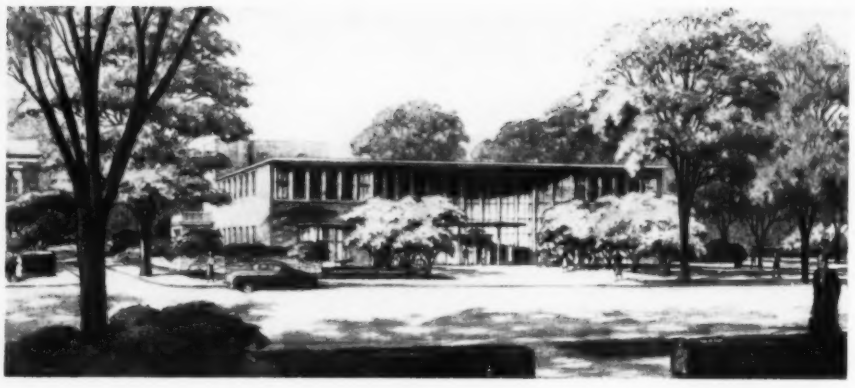
(*News continued on page 358*)

(*Continued from page 356*)

NEW LIBRARY PLANNED FOR MONTCLAIR, N. J.

The public library of Montclair, N. J. will soon occupy a new building designed for it by Voorhees, Walker, Foley & Smith, Architects.

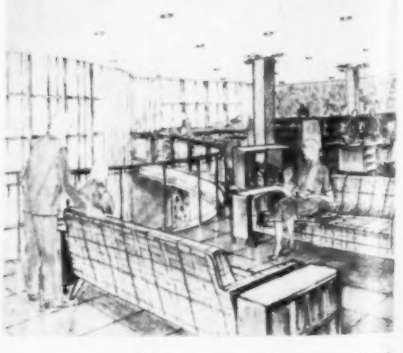
Made possible by the gift of a site plus $250,000 from the Davella Mills Foundation of Montclair, the building is designed to emphasize "community neighborliness, modernized."



The stack area is located below street level. The main floor is taken up with information services and children's reading rooms, while the second floor includes a conference room, a section for teen-agers, a popular library for adults, cataloguing area and a relaxation room for the staff.

Framing is of fireproofed steel and exterior walls are brick and glass, trimmed with marble.

Feature of building is large interior well, shown above as seen from first floor, below, from second floor

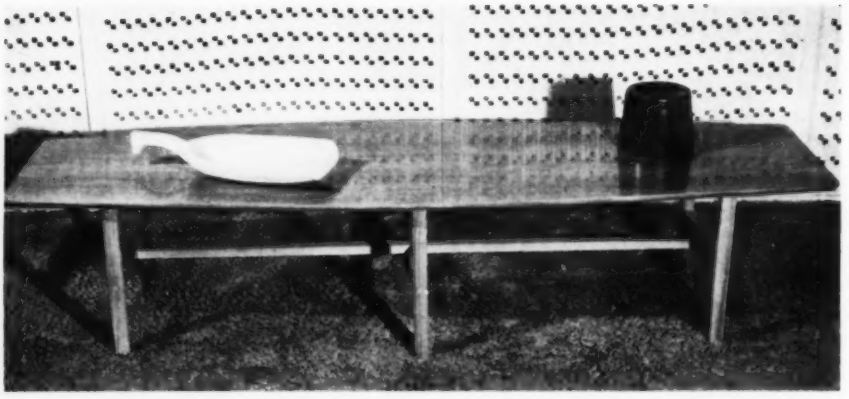


(*News continued on page 360*)

(*Continued from page 358*)

1952 GOOD DESIGN SHOW HAS NEW YORK OPENING

Good Design 1952, third in the annual series sponsored jointly by the Museum of Modern Art and the Merchandise Mart of Chicago, opens in New York this month. It presents a selection from the items chosen in January and in June for showing in the continuous exhibit at the mart.



Cocktail table by Milo Baughman is one of several designs in show to come from California

The June edition of the show added 220 new items of home furnishings to the selections picked in January. This year's exhibit was installed at the mart in a setting designed at the beginning of the year by architect Paul Rudolph (see ARCHITECTURAL RECORD, March 1952, page 26). The latest selections were, as usual, chosen by a committee appointed by the museum and headed by Edgar Kaufmann, Jr., its director of Good Design.

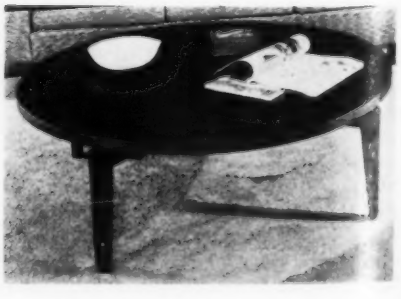
About 40 per cent of the items in the new group are classified in the moderate price bracket. Nearly one third of the selections in the June show come from California. Not only American but European and Asian designs are included: the foreign selections make only a small proportion of the exhibit.

More Focus on Color

An increasing emphasis on color was noted in the selections, together with

(*Continued on page 364*)

Round low table by Jens Risom features revolving top. Available in walnut



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a consequent lessening in the attention given to texture and pattern. This trend, according to Mr. Kaufmann, can be observed in new fabrics, lamps, furniture, floor coverings and a variety of accessories.

Continue Natural Materials

In all these categories, the interest in natural materials such as wood, wicker and hemp continued strong. Observers also noted a decrease in the use of wrought iron and a greater restraint in design where wrought iron is used. Many designers seem to be moving away from the linear toward solid forms and stronger colors, Mr. Kaufmann reported.

General Design Level High

Another interesting aspect of the show cited was a diminished difference in quality between designs accepted and rejected by the committee. This difference was less marked in the present selection than ever before. A higher general level of design in all price ranges was held to account for its lessening. What this would seem to indicate, of course, is that the objective for which the exhibition was originally organized — the education of both consumers and producers to increased awareness of the factors entering into good design of furniture and other utilitarian objects — has been at least partly achieved.

Executive desk is designed by Florence Knoll, has metal frame, wood top. Saarinen chairs were in previous shows

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Chairs in show include, from top: knock-down rocker in Florentine-finish beech with loose spring cushions, designed by Ole Wanscher; dining chair with woven fiber seat and back, designed by Harold Cohen and Davis Pratt; woven-rush side chair, designed by Hans Wegner

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(Continued from page 368)

Among storage units added to this year's show are two multi-purpose pieces by Danish designer Borge Mogensen, below top and center. Both are secretary-chest-vanity combinations and are finished in teakwood. They are manufactured in Denmark

Below, three-in-one table designed by Edward Wormley is adjustable to three separate heights, can serve as coffee table, work table or dining table for four people

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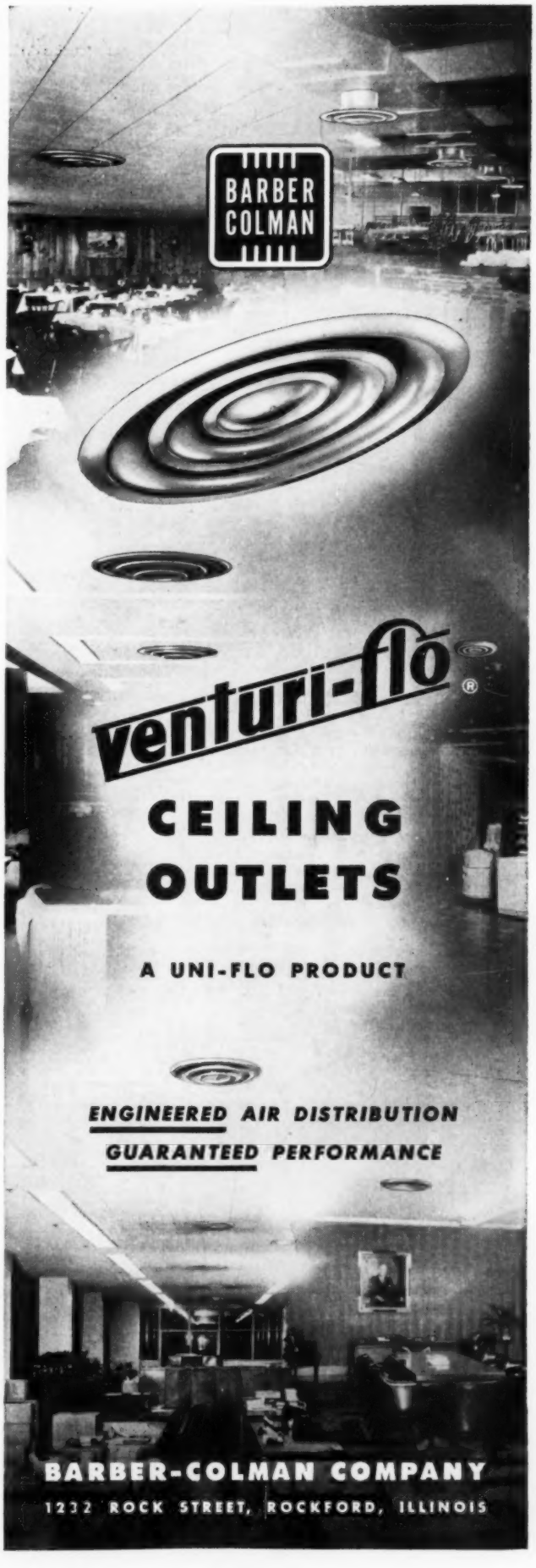

REQUIRED READING

(*Continued from page 48*)

Modestly enough, the author states his hope that this volume will form the basis of a series of editions which will serve those who would know the vocabulary of the mother of the arts.

SYMBOL OF LIBERTY

Frontier of Freedom. The Portrait of an Extraordinary Village, Old Deerfield, Massachusetts. By Samuel Chamberlain and Henry N. Flynt. Hastings House Publishers Inc. (41 East 50th Street, New York 22, N. Y.) 1952. 7 by 9½ in. 154 pp., illus.

The heroic defense of Old Deerfield is a valiant chapter in American history. Twice during the days of Indian massacre was the outpost destroyed; twice, by a handful of bereaved survivors, rebuilt. Small wonder that toward the latter quarter of the eighteenth century Deerfield had become a symbol of liberty, or that in 1775 her youth should respond to the call for Minute Men. Or that the village itself should serve during the Revolution as a regional commissary for American forces. When at the end of the century, Deerfield, no longer the agricultural center of the valley and bypassed by industry, settled down to its new security, the renewal of a long-neglected interest in education brought the establishment in 1797 of Deerfield Academy which was to become one of the finest preparatory schools in the country. So in the nineteenth and twentieth centuries Deerfield sons, both natural and adopted, have continued to serve their country in its ceaseless crusade for freedom.

This is the story of Deerfield. The story of the clapboard and brick houses, built after the massacre of 1704, that stand today, venerable, peaceful, beneath the shade of ancient elms and sycamores, along the street — a symbol of liberty — the symbol that Samuel Chamberlain and Henry Flynt have selected as an answer to the vilification of the Communists.

Into some 14 pages of text is condensed the history of the village; and then some 140 pages of captioned photographs continue the narrative. The courageous strength of the early settlers is there in the simple, sturdy charm of their Connecticut Valley architecture; their culture and good taste is reflected in their eighteenth century furnishings. Chamberlain's photographs are, as usual, splendid. Together with the text they have met the challenge of their subject.

(*Continued on page 380*)

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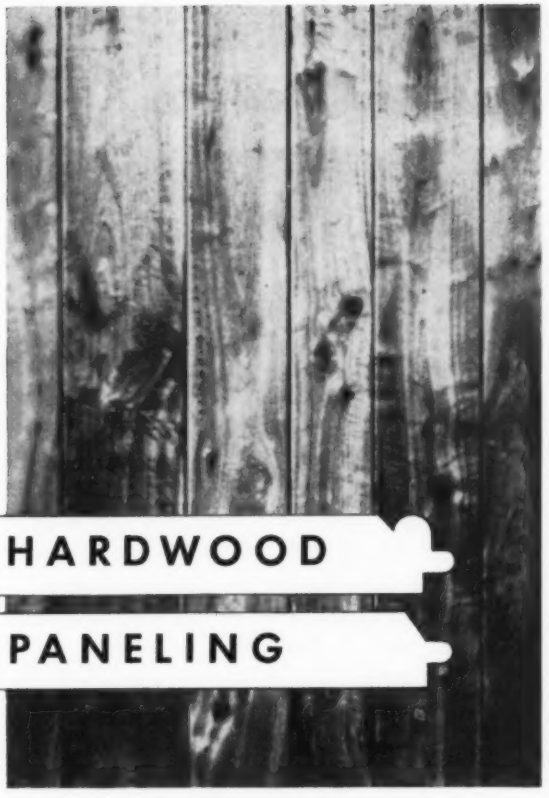

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REQUIRED READING

(Continued from page 376)

If "Frontier of Freedom" does not find its way behind the Iron Curtain, it nevertheless will be amply justified in having reminded Americans of the courage and faith that keep alive the spirit of liberty.

BOOKS RECEIVED

Housing in the Tropics. United Nations Housing and Town and Country Planning Bulletin 6-ST/SOA/SER.C/6. United Nations Publications. Sales No.: 1952. IV. 2. In 1947 the study of the problem of low cost housing in tropical areas was recommended by the United Nations Social Commission. The Secretary-General subsequently suggested a study of housing for tropical and under-developed areas, to be prepared "in cooperation, as appropriate, with the specialized agencies and inter-governmental organizations concerned," which was approved by the Economic and Social Council in July 1950. Two Secretariat reports have been published. This issue of the bulletin is another part of the study. Intended for the use of government services, architects, town planners, building practitioners and householders, it states the "problem of tropical housing in less developed areas, and indicates the main lines along which a solution might be found."

Principles of Hospital Administration. By John R. McGibony, M.D. G. P. Putnam's Sons (New York, N. Y.) 1952. 5½ by 8½ in. 540 pp. This book by Dr. McGibony, Medical Director; Chief, Division of Medical and Hospital Resources, Public Health Service, Federal Security Agency, is written for hospital administrators, trustees, nurses, doctors, students and those interested in the hospital and health field. In five main sections — Preface to Better Patient Care, Planning for Services, Planning for Operation, Management Services and Clinical Services — the author presents the important stages in the development of the community hospital from the determining of its size and site, architect and design, cost construction and equipment, to its actual operation.

Towns and Buildings. By Steen Eiler Rasmussen. Harvard University Press (Cambridge, Mass.), 1951 — This is the English edition of a book first published in Danish in 1949. The book compares the plans and architectural styles of leading cities of ancient and modern times.

(See page 6 for Index to Advertising)